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CHINA'S ENERGY INTERESTS IN CENTRAL ASIA

Abstract. *This article analyses China's strategic energy interests and policy in the Central Asian region. As China's domestic demand for energy resources grows and the "Malacca Dilemma" persists along traditional maritime routes, Central Asia occupies an increasingly important place in Beijing's energy diversification strategy. Drawing on energy security theory and Mackinder's Heartland concept as analytical frameworks, the article examines China–Central Asia energy cooperation – with particular attention to the transition from conventional energy to renewable sources within the "Green Belt and Road Initiative." A SWOT analysis is also applied to evaluate the strengths and weaknesses of this economic partnership, the opportunities it creates for regional states, and the geopolitical risks it entails, including the "debt trap" dynamic.*

Keywords: *Malacca Dilemma; Belt and Road Initiative; Green Belt and Road Initiative; Heartland theory; energy security theory; renewable energy; geopolitics; debt trap diplomacy; Central Asia.*

INTRODUCTION

As the world's largest energy consumer, China has long sought safe, clean, and cost-effective transport routes to meet its energy needs. Chinese resource transportation has traditionally been dependent on maritime routes; however, vulnerabilities at chokepoints such as the Strait of Malacca have generated serious concerns about supply disruptions. This vulnerability – commonly referred to as the "Malacca Dilemma" – revealed the strategic imperative of diversifying China's energy supply chains. In response, China launched the Belt and Road Initiative (BRI) in 2013, a multi-dimensional strategy aimed at enhancing economic connectivity and infrastructure development across Eurasia (China Power Team, 2021). One of BRI's principal goals is to strengthen China's energy and commercial security by providing alternative overland transport networks

to Europe and to maritime routes. In 2019, in response to mounting environmental concerns, BRI was reoriented towards renewable energy and sustainable development, becoming the “Green BRI” (Yu & Wallace, 2021:225).

Since gaining independence from the Soviet Union, the Central Asian states have faced challenges of low production capacity, shortages of qualified personnel in the energy sector, and technological constraints. China, with its immense technological capabilities, decades of experience, and large-scale investment, has come to regard Central Asia as a strategically important and convenient region for meeting its growing energy requirements.

The present article aims to analyse China’s energy interests in Central Asia from a geo-economic perspective, to examine the transition from conventional to renewable energy within the Green BRI framework, and to assess the implications of this partnership for both sides through a SWOT analysis.

LITERATURE REVIEW AND METHODOLOGY

Existing research on China’s energy interests in Central Asia has been conducted primarily from geopolitical, geo-economic, and infrastructure project perspectives. The general literature links China’s energy security strategy to overcoming the “Malacca Dilemma” and diversifying imports via overland routes. From a regional standpoint, beyond Russia and the United States, major powers including China, the European Union, Turkey, and India have demonstrated varying degrees of influence and competing interests in Central Asia, and their mutual competition and coordination have shaped the region’s evolving geopolitical landscape (Zhou, He & Yang, 2020:30). The reliability of energy supply – particularly for imported oil – remains a persistent concern for Chinese energy policymakers, and the uncertainty intensified by the 2021 energy crisis has reinforced China’s resolve to challenge US naval dominance on critical shipping lanes (Mat, 2024:25).

Some scholars assess the construction of the Kazakhstan–China oil pipeline and the Central Asia–China gas pipeline (Lines A, B, and C) as factors with major impacts on regional energy supply and geopolitics (Xie, 2021:200). These pipelines have weakened Russia’s monopoly and enabled the delivery of billions of cubic metres of gas to China annually (Dadli, 2019). Many analysts examining China’s energy interests within the BRI framework note that while Chinese investments bring economic benefits to the

region, they also generate “debt trap” risks and environmental concerns (Fazilov & Chen, 2013:50–51; Pop, 2010:197–220). The present article goes beyond geopolitical and geo-economic analysis to examine Central Asia’s significance in China’s transition to a “green economy” and to assess the implications for regional states. The study employs analytical-synthetic and SWOT analysis methods.

RESULTS

Theoretical framework. This study draws on two principal theoretical frameworks. The first is the energy security theory developed by Daniel Yergin and the International Energy Agency (IEA), grounded in the “four A” principles: availability, accessibility, affordability, and acceptability. For China, these four dimensions constitute the key criteria for pursuing its energy interests in Central Asia. China’s dependence on maritime routes, the geopolitical turbulence in the Middle East, and the imperative of reducing reliance on major energy-supplying regions and states all make energy security a central pillar of Chinese energy policy; the “four A” framework also provides an analytical lens for understanding China’s policy to reduce dependence on the “Malacca Dilemma.” The second key theoretical framework is Halford Mackinder’s “Heartland theory”: “Who rules East Europe commands the Heartland; who rules the Heartland commands the World Island; who rules the World Island commands the World” (Mackinder, 1904). China’s BRI is being realised precisely through connecting this Heartland region via overland routes and establishing an energy corridor, a strategy that also explains how China intends to overcome its maritime vulnerability (the Malacca Dilemma) and secure continental strategic dominance.

The “Malacca Dilemma” in Chinese energy policy. The Strait of Malacca is the shortest maritime route between the Middle East and East Asia, reducing transport time and costs between Asia, the Middle East, and Europe, and its strategic location makes it a critical waterway for hydrocarbons, container shipping, and general cargo. According to data from the US Energy Information Administration (EIA), in 2020 approximately 16 million barrels of crude oil and 3.2 million barrels of liquefied natural gas (LNG) transited the strait daily – the second-largest volume in the world after the Strait of Hormuz (World Bank, 2024). More than 70 percent of China’s oil and LNG imports pass through the Strait of Malacca, making it a route of critical importance from the perspective of Chinese energy security policy (Mat, 2024:25). China is seeking to

alleviate the Malacca Dilemma by reducing its dependence on energy imports from the Middle East and by establishing alternative overland connections and energy partnerships with Russia, Central Asia, Myanmar, Pakistan, Iran, and Turkey. Cooperation with Pakistan through the China–Pakistan Economic Corridor (CPEC) was conceived as an opportunity to gain an additional access point to the Indian Ocean via a new gas pipeline; however, the complex terrain of the Himalayan region and high transit costs make such investments economically challenging, and the region’s instability renders infrastructure in it potentially vulnerable in the event of conflict with India.

The significance of Central Asia’s geographical proximity for China. Central Asia accounts for approximately four percent of global energy reserves. Two considerations make the region particularly important for China’s energy supply. First, China aims not only to access a more stable and proximate source of abundant energy but also to compete actively for energy security by developing “energy diplomacy” with the region. Second, cultivating close ties with Central Asia through energy links helps China pre-empt threats from separatist activists in its Xinjiang Autonomous Region (Zhou, He & Yang, 2020:30). Taking into account the 3,300 km western border it shares with Kazakhstan, Kyrgyzstan, and Tajikistan, China has reorganised military units in Xinjiang as an important instrument for preventing various anti-government separatist groups from emerging in the region. According to an IEA report, China has become the world’s largest energy consumer, accounting for 27 percent of global primary energy consumption in 2025; its dependence on oil imports has grown from approximately 50 percent a decade ago to roughly 70 percent today (Mat, 2024:25). As a neighbouring region rich in oil and natural gas reserves, Central Asia can play a significant role in China’s strategy to reduce its dependence on Middle Eastern energy supply (Xie, 2021:200).

Developing renewable energy initiatives under the Green BRI. China’s Green BRI project represents a transformative approach to global infrastructure development, implementing sustainable and environmentally beneficial projects aligned with global climate objectives. This strategic orientation corresponds to China’s own energy needs, since Central Asia possesses abundant renewable resources. Several factors are driving the transition from conventional to renewable energy: the declining costs of solar and wind technologies (which have significantly influenced energy investment decisions

in recent years compared to capital-intensive large hydropower projects); growing dissatisfaction in developing countries with debt financing practices associated with large infrastructure credits (Brautigam, Huang & Acker, 2020:34–55); and Chinese banks' adoption of more conservative lending policies, reflecting a shift towards more sustainable and financially less risky investment strategies (Horn, Reinhart & Trebesch, 2021). These factors favour renewable technologies such as solar and wind, which carry lower costs, reduced environmental impact, and alignment with global climate objectives (Lázaro-Touza & Esteban, 2023:67–89; Hong Yu, 2023:535–547). Beyond conventional renewable energy projects, China is developing electric vehicle (EV) infrastructure in Central Asia and making substantial investments in Uzbekistan. Chinese automotive manufacturers including BYD and Henan Suda have played a significant role in developing electric vehicles and establishing charging station networks in Uzbekistan (CSCD, 2024).

DISCUSSION: SWOT ANALYSIS

Strengths. China's energy interests are advantageous not only for China's own energy security but also for the five Central Asian republics. Although the Central Asian states possess substantial energy reserves, their limited scientific and technological capacity in extraction, processing, and production constrains the degree to which they can exploit these resources. China, with its enormous technological capabilities and extensive practical experience, therefore serves as an indispensable partner for these states. Additionally, China's direct land border with the region facilitates logistical access for transporting energy resources from Central Asia, and the region functions as a key energy corridor in resolving the "Malacca Dilemma." China also gains easier overland access to Iran, the Middle East, and European markets through Central Asia – a factor that may substantially reduce its dependence on maritime routes for energy exports (Fazilov & Chen, 2013:50–51).

Weaknesses. The practice of "debt trap diplomacy" in the pursuit of China's energy projects in Central Asia is eroding confidence in China within the region and obstructing the implementation of numerous projects. Chinese companies typically extend large-volume credits in financing projects. For example, China is Kyrgyzstan's largest creditor, accounting for 45 percent (over \$1.5 billion) of the country's external debt obligations. China has invested nearly \$1 billion in energy projects in Kyrgyzstan, with

plans to transform the country into an energy exporter to South Asia – a prospect that has heightened concerns in official Bishkek about falling into a “debt trap” (Kun.uz, 2022). In March 2021, Kyrgyz President Sadyr Japarov did not exclude the possibility that certain key facilities in the country could pass under Chinese control if official Bishkek failed to service its external debt to the PRC – citing specifically the Bishkent Heat and Power Plant, the Datka–Kemin electricity transmission line, and the north–south connecting road (Rossiyskaya Gazeta, 2021). These dynamics are generating hesitation among Central Asian states towards China and hampering the implementation of energy projects.

Opportunities. China has pursued several prospective objectives through its energy interests. First, it aims to establish secure overland logistics routes through Central Asia in order to create a safe and freely accessible corridor to Iranian, Middle Eastern, and European markets – an arrangement that would provide China with free and unimpeded access for export goods, along with an affordable and secure logistics pathway. Second, Central Asia serves as an important region for reducing China’s dependence on energy imports from the Middle East and the Persian Gulf states (Zhou, He & Yang, 2020:30). Through these opportunities, China seeks to implement the “Belt and Road” initiative across the “heart” of Eurasia – a region that occupies a strategically critical position connecting East and West.

Threats. However attractive China’s energy projects and investments may be, they may generate several significant threats for Central Asian states. First, the strong Russian factor in the region – and the orientation of Central Asian gas and oil pipelines towards Russia since independence – has enabled Russia to maintain a dominant position in the region. As China seeks to expand its influence by intensifying its interest in Central Asian energy resources, a Russia–China geopolitical clash in the region becomes a possibility, in which the Central Asian states may find it difficult to navigate bilateral relations with both powers simultaneously (Pop, 2010:197–220). Second, the reorientation of pipeline networks towards China risks shifting the region from Russian influence to Chinese influence in the future. Moreover, China’s “debt trap diplomacy” may in the long run exert a negative impact on the internal and foreign policies of regional states (Brautigam, Huang & Acker, 2020:34–55).

CONCLUSION

In conclusion, China – as one of the world’s major power centres – faces a critical strategic challenge in meeting the energy demands of its energy-hungry economy. The “Malacca Dilemma” remains a principal driver of this challenge, and the establishment of a secure and cost-effective energy corridor constitutes one of the key objectives on China’s agenda. As a resource-rich, geographically proximate region that shares a land border with China, Central Asia plays a decisive role in realising this objective (Xie, 2021:200; Mat, 2024:25). For Central Asian states, too, cooperating with a major power such as China to diversify their energy systems and gain access to global markets offers tangible benefits. The centuries-long cultural and historical ties between China and Central Asia further serve to deepen cooperation and proximity between the parties.

At the same time, the risks of “debt trap diplomacy,” geopolitical competition with Russia, and the potential for an excessive expansion of Chinese influence in the region must not be underestimated. The Central Asian states need to develop a more robust policy framework for their engagement with China – one that preserves their independent political and economic course, balances relationships with diverse partners, and establishes effective mechanisms for managing debt burdens (Brautigam, Huang & Acker, 2020; Horn, Reinhart & Trebesch, 2021). The long-term sustainability of Sino-Central Asian energy cooperation will ultimately depend on the capacity of regional states to convert partnership into genuine and equitable development rather than economic dependency.

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