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THE 2026 STRAIT OF HORMUZ CRISIS AND CHINESE ENERGY SECURITY: A MULTI-DIMENSIONAL ANALYSIS OF VULNERABILITY, RESILIENCE, AND STRATEGIC ADAPTATION

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The 2026 Strait of Hormuz Crisis and Chinese Energy Security: A Multi-Dimensional Analysis of Vulnerability, Resilience, and Strategic Adaptation

by Mukhammad Khodjanazarov

Abstract

The 2026 Strait of Hormuz crisis represents a significant geopolitical shock to global energy markets. Triggered by joint United States-Israeli strikes on Iranian strategic infrastructure and the subsequent retaliatory blockade of the Strait by the Islamic Revolutionary Guard Corps (IRGC), the crisis threatened nearly one-fifth of global oil supply. As the world's largest oil importer, China faces a particularly complex strategic challenge. Nearly half of China's crude imports originate from the Persian Gulf, making the Strait of Hormuz a crucial energy chokepoint for the country's economic stability. Understanding what is happening in the Middle East is more important than ever.

This article analyzes the implications of the crisis for China's energy security through a multidimensional analytical framework that examines structural vulnerabilities, macroeconomic resilience, and long-term strategic adaptation. The study argues that although China remains highly exposed to maritime supply disruptions, it possesses significant buffers through strategic petroleum reserves, diversified pipeline networks, and a relatively oil-insulated electricity system. At the same time, the crisis reinforces Beijing's long-term strategy to reduce dependence on maritime chokepoints by expanding Eurasian energy connectivity and accelerating the transition toward electrified and renewable energy systems.

Keywords
China; energy security; Strait of Hormuz; geopolitical risk; oil markets.

Introduction

The Strait of Hormuz occupies a central position in the architecture of global energy markets (IEA, 2024; EIA, 2024). The strait is the only maritime passage between the Gulf and the Gulf of Oman and the route for about a quarter of the world's liquefied natural gas and seaborne trade from Gulf countries to reach the global market. Because of this strategic significance, even limited disruptions in maritime traffic through the Strait have historically produced immediate effects on international energy prices and global economic stability. Large volumes of oil flow through the strait, and very few alternative options exist to move oil out of the strait if it is closed. In 2024, oil flow through the strait averaged 20 million barrels per day (EIA, 2024; BP, 2024), or the equivalent of about 20% of global petroleum liquids consumption (Dunn and Barden, 2025).

The geopolitical escalation in February 2026 significantly intensified these risks. Joint military strikes conducted by the United States and Israel against Iranian targets triggered a severe regional confrontation. In response, Iran's Islamic Revolutionary Guard Corps (IRGC) moved to restrict maritime traffic through the Strait of Hormuz, raising the possibility of a partial or prolonged blockade. Such a development created widespread fears of a major supply shock in global oil markets and heightened uncertainty among energy-importing economies. Despite Beijing's calls to keep the strait open to international trade, ship-tracking data shows that Chinese tanker and container ships have all but ceased transits since the conflict began, leaving dozens of Chinese ships trapped in the Persian Gulf (Pretat et al., 2026).

Asian economies experience specific vulnerabilities because the Strait sees most of its crude oil exports going to destinations in this region. According to estimates more than 80 percent of oil shipments that pass through the Strait ultimately reach Asian markets which include China and India and Japan and South Korea (IEA 2024 Yergin 2020). China emerges as the country with maximum exposure because its energy needs require extensive crude oil imports which it must obtain from foreign countries.

The country processes 17 million barrels of crude oil daily while its total oil consumption depends on foreign sources for 70 percent of its needs (BP 2024 IEA 2024). The Persian Gulf region supplies approximately 50 percent of these incoming shipments. The Strait of Hormuz serves as an essential supply route for the Chinese economy. The Chokepoint disruption which affects maritime transportation will directly impact China's industrial production capabilities and transportation systems and overall economic stability. The 2026 Hormuz crisis creates a research opportunity to study how China maintains its energy security through its strategic energy security systems. The 2026 Strait of Hormuz crisis marks a turning point for global energy security. The crisis affects oil markets while it challenges the structural stability of China's energy system which shows the strategic problems that the world's biggest crude oil importer needs to solve. The disruption leads to an accelerated process where Beijing implements its long-term strategy for building an electrified system which includes expanding renewable energy and creating multiple land-based energy supply chains throughout Eurasia. Understanding how China manages these simultaneous short-term vulnerabilities and long-term structural transformations is essential for evaluating the future trajectory of global energy geopolitics.

The central question addressed in this article is whether China's current energy system possesses sufficient structural resilience to withstand a prolonged disruption in Gulf oil exports.

Theoretical Framework and Methodology

The research study employs energy security studies and international political economy as its theoretical foundation. Energy security exists because countries need to secure dependable and affordable energy resources which support their economic growth and national security needs (Yergin 2006 Cherp & Jewell 2014). States increase their energy security according to Daniel Yergin's widely used framework by establishing multiple supply routes and building up their strategic reserves and developing new energy technologies.

The "four As" model developed by Cherp and Jewell in 2014 provides an effective framework for assessing energy security through its four components of availability and accessibility and affordability and acceptability. The term availability describes the energy resources which exist in physical form while accessibility refers to the ability to access those resources from specific geopolitical locations and accessibility centers on stable pricing and acceptability addresses both environmental protection and technological system requirements and sustainable development goals.

The application of this framework to China reveals a fundamental structural contradiction. The country depends on imported crude oil which moves through sea chokepoints. China has made substantial investments in petroleum reserve systems and supply route expansion and clean energy technologies to decrease its long-term danger.

The article uses qualitative geopolitical analysis together with economic impact assessment as its research method. The research study uses publicly accessible energy statistics and policy documents and industry reports to assess Chinas vulnerability to supply interruptions which may occur in the Strait of Hormuz. In addition, the analysis incorporates economic estimates suggesting that a ten-dollar increase in global oil prices could reduce China's GDP growth by approximately 0.1–0.2 percent, primarily through increased production costs in energy-intensive industries.

Main Analysis

Refinery-Level Vulnerabilities in China's Oil Supply System

China's complete crude supply system shows strong overall resilience, but its refinery operations display significant weaknesses. In 2025, the Strait of Hormuz accounted for roughly thirty-five percent of China's total crude oil imports (IEA, 2024; EIA, 2024). The strait functions as an essential energy supply route for China because the share of seaborne imports through the strait decreased during the first months of 2026.

Major refining companies show different operational patterns which create different vulnerability levels to industrial accidents (Downs, 2019; Kong, 2021). PetroChina uses its extensive local production combined with Russian pipeline oil imports to decrease its need for maritime oil shipping.

Sinopec depends on Persian Gulf seaborne crude imports more than any other source which makes the company highly susceptible to supply interruptions that occur during maritime operations.

The existing contractual frameworks create additional challenges to resolving the problem. Large integrated refining complexes like Zhejiang Petrochemical need to establish long-term supply agreements with Middle Eastern producers that include Saudi Arabia (Downs, 2019). Refineries face technical difficulties and economic challenges when they switch suppliers because their operations depend on specific crude grades. Refineries must reduce their daily operations because Gulf oil shipments have stopped or they need to carry out their scheduled maintenance ahead of time.

Geographic factors also shape vulnerability within China's refining system. Refineries located in northern regions achieve operational advantages because they operate near domestic oil fields and Russian pipeline systems. Southern refineries and facilities which receive their supplies through maritime routes experience higher risks of operational interruptions which occur in the Strait of Hormuz.

The 2026 Hormuz crisis demonstrates two energy system characteristics about China international energy security. The refining sector of China faces operational risks because maritime oil transportation systems experience. The refining capacity of the country primarily belongs to large state-owned enterprises PetroChina and Sinopec but their supply chains show substantial differences in resilience to disruptions. PetroChina achieves operational advantages because it can access domestic oil resources and Russian pipeline imports which help it decrease dependency on shipping routes. The Middle East shipping routes create greater risks for Sinopec because the company relies more on seaborne crude imports from this region.

The independent refineries of China which industry insiders call "teapot" refineries contain multiple security weaknesses. The facilities which operate in Shandong province process a large part of China's total refining capacity while using discounted Iranian crude oil as their primary raw material. This supply relationship provides economic advantages under normal market conditions, but it also creates substantial risks during geopolitical crises. Any disruption which impacts Iranian exports or shipping routes through the Strait will swiftly decrease feedstock availability for these refineries, which will require them to find new suppliers who charge much higher prices.

The economic consequences of such disruptions extend beyond the refining sector. China's economy will face inflationary pressures because rising oil prices will lead to higher transportation costs and increased industrial production expenses. The energy-intensive industries of petrochemicals and steel and cement manufacturing will experience operational difficulties because their essential materials will become more expensive, which will result in lower profit margins and decreased ability to compete in foreign markets. The economic model shows that even a small rise in worldwide oil prices will decrease China's yearly GDP growth by multiple tenths of a percentage point. China's system has several crucial safeguards, which help to reduce existing threats. The nation maintains its most vital asset through its extensive strategic petroleum reserve system.

Beijing has dedicated substantial financial resources during the past ten years to enhance national oil storage facilities. Current estimates indicate that China possesses more than one billion barrels of crude oil, which it holds in both its strategic and commercial oil reserves (IEA, 2024; Kong, 2021). China's energy system receives benefits from both its official strategic petroleum reserves and the substantial commercial inventories, which state-owned enterprises and independent refiners maintain. The combined stockpiles of these two entities create an extensive protection system, which defends against immediate supply interruptions while enabling government agencies to maintain domestic market equilibrium during international conflict situations.

Independent refiners, commonly known as “teapot” refineries and concentrated primarily in Shandong province, play an especially important role in this buffering capacity. The facilities operate their systems through shipment networks that bring discounted crude oil from sanctioned Iranian suppliers. The Chinese market reached its peak Iranian crude imports before the 2026 crisis started (S&P Global, 2024; IEA, 2023) which enabled private refineries to stockpile significant amounts of feedstock.

The existing situation contains “crude on water” because it includes oil shipments that departed from exporting nations before the crisis began. The shipments provide temporary relief for maritime disruptions because they enable refineries to keep running their operations despite shipping routes experiencing instability. The government uses these stockpiles to distribute oil during times of supply shortages, which helps to stabilize local markets and support refinery operations.

China achieves its ability to withstand challenges through its network of different energy partnerships. China has increased its oil imports from Russia and Central Asia during the last few years which has decreased its dependency on Middle Eastern crude oil (Henderson & Mitrova, 2022; BP, 2024). Russia started exporting most of its oil to Asian countries after Western nations imposed sanctions because of the Russia-Ukraine war, which resulted in closer energy ties with China.

Pipeline infrastructure connecting China to Russia and Central Asia provides an alternative supply route that bypasses vulnerable maritime chokepoints (Lee, J., 2021). The 2026 Hormuz crisis enables Beijing to implement its existing strategy which seeks to establish overland energy networks throughout Eurasia. The Power of Siberia 2 natural gas pipeline project stands as the most important element of this plan because it will transport up to fifty billion cubic meters of gas from Russia to China via Mongolia (Henderson, 2023; IEA, 2024).

The pipeline will enhance China’s access to terrestrial natural gas resources while decreasing its dependence on maritime liquefied natural gas shipments which face high risks from ocean disruptions and political conflicts that occur in essential maritime routes. The crisis develops into an advantage for China because it improves their negotiation strength against Russia. After Western countries imposed sanctions on Russia due to the Ukraine conflict, Moscow started relying more on Asian energy markets to meet its needs. This shift gives Beijing stronger control over the negotiation process because it determines pricing and long-term supply arrangements.

The country currently controls more than eighty percent of global solar panel production and a similarly large share of battery cell manufacturing (IRENA, 2024; BloombergNEF, 2024). China uses its industrial strength to build up its renewable energy systems while using technology sales to control international energy markets. Renewable energy infrastructure investments together with transportation system electrification efforts start decreasing the strategic value of imported oil throughout the years. The energy transition process which Beijing implements produces two types of benefits because it helps protect the environment and strengthens China’s global political position (Zhang,C., 2022) by reducing China’s dependence on maritime chokepoints for its economic safety. The 2026 Hormuz crisis therefore illustrates an important structural trend in China’s energy strategy. The country develops an energy system which combines different power sources while protecting itself from short-term oil market problems.

The Hormuz crisis creates economic consequences which also enable China to develop its diplomatic power throughout the Middle East (Rolland, 2022; Yergin, 2020). Beijing serves as the top trading partner for numerous Gulf nations while it also purchases substantial quantities of their energy resources which creates a strong need for the country to sustain peace in the area.

China has established itself as a neutral diplomatic force which helps different countries resolve their conflicts through dialogue (Zhao,S., 2019). Beijing could enhance its global reputation as a responsible international stakeholder through its contribution to de-escalation efforts and its support of maritime traffic negotiations which aim to restore operations through the Strait of Hormuz.

China conducts diplomatic activities which support its main foreign policy goal of establishing security along the essential trade routes that link to its Belt and Road Initiative.

Conclusion

The 2026 Strait of Hormuz crisis provides a revealing test of China’s energy security strategy. China maintains its position as the world largest oil importer, yet it faces permanent danger from any maritime oil transport disruptions that affect the Persian Gulf region. The Strait of Hormuz supply interruptions and price shocks create major threats which endanger both China's refining capacity and its industrial output and overall economic performance.

China maintains multiple systems which enable it to withstand these operational weaknesses. Strategic petroleum reserves, diversified supply routes through Eurasian pipelines, and strong energy partnerships with countries such as Russia provide important buffers against supply shocks. The Chinese electricity system operates independently from oil usage, which helps to prevent major energy shortages that could occur during oil market disruptions. The crisis demonstrates the strategic reasoning behind China's energy transition strategy which will extend into future developments. Beijing plans to decrease its maritime energy dependency by developing renewable energy sources and electrifying vital economic sectors while establishing better energy links throughout Eurasia.

The 2026 Hormuz crisis functions as more than a short-lived geopolitical disturbance. China intends to create an energy system which maintains operational existence through unpredictable international circumstances while it shifts toward more efficient energy systems.

China's long-term strategy may ultimately transform the nature of energy security itself. As renewable energy, electrification, and battery technologies become central components of economic development, the strategic importance of maritime oil chokepoints may gradually decline. In this emerging system, energy security will depend less on control of fuel supplies and more on technological leadership in electricity generation, storage, and transmission. In this sense, the 2026 Hormuz crisis may accelerate China's transition toward what some analysts describe as an emerging "electrostate" (Tooze, 2023).

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