INSTITUT Montaigne

CHINA Trends #26

Energy Security First: What Hormuz and Chinese Sources Reveal About Beijing's Strategy

Image Copyright: CN-STR / AFP

About Institut Montaigne:

Institut Montaigne is a leading independent think tank based in Paris. Our pragmatic research and new ideas aim to help governments, industry and societies adapt to our complex world. Institut Montaigne's publications and events focus on major economic, societal, technological, environmental and geopolitical changes. We aim to serve the public interest through instructive analysis on French and European public policies and by providing an open and safe space for rigorous policy debates.

About China Trends:

China Trends seeks understanding of China from Chinese language sources. In an era where the international news cycle is often about China, having a reality check on Chinese expressions often provides for more in-depth analysis of the logic at work in policies, and needed information about policy debates where they exist. China Trends is a quarterly publication by Institut Montaigne's Asia Program, edited by Pierre Pinhas, and with each issue focusing on a single theme.

Joseph Dellatte

Resident Fellow for Asia and Head of Energy and Climate Studies at Institut Montaigne

Dr. Joseph Dellatte joined Institut Montaigne in 2022. He currently serves as Head of Energy and Climate Studies and Resident Fellow within the Institute's Asia Program, where he leads the team dedicated to energy and climate issues. He is also an Associate Researcher at Kyoto University and a member of the Japanese Research Group on Renewable Energy Economics. His research focuses on industrial decarbonization policies, international climate governance, carbon pricing, financing the ecological transition, and Europe-Asia relations on these topics.

Introduction

The current energy crisis has revealed a paradox at the heart of China's rise. Over the past two decades, **China has built the world's largest energy system**. It has become the leading producer of electricity, the dominant manufacturer of renewable energy technologies, the world's largest electric vehicle market, the largest consumer of oil and importer of liquefied natural gas (LNG), and one of the principal drivers of global energy investment. **Yet despite this extraordinary transformation, China has become more vulnerable to external energy shocks**. More than 70 percent of its oil consumption depends on imports. Significant portions of its natural gas supply originate abroad. Even the rapid expansion of its nuclear sector increasingly relies on foreign uranium. The Hormuz crisis has therefore exposed not a temporary weakness, but a structural feature of China's development model, a continued dependence on energy resources and supply chains beyond its control. It has also revealed once again that when confronted with external energy shocks, China ultimately falls back on its vast domestic coal resources as its ultimate energy security insurance policy.

> The Hormuz crisis has exposed not a temporary weakness, but a structural feature of China's development model.

This edition of *China Trends* explores Chinese sources on different dimensions of this challenge through three papers. One examines Russia and natural gas. Another analyses China's exposure to Middle Eastern oil. A third investigates raw uranium supplies, from Kazakhstan notably, and Beijing's growing engagement with resource-producing states. At first glance, these appear to be separate issues. In reality, they tell the same story. Together, they reveal the central organizing principle of China's energy strategy which is the persistent effort to reduce strategic vulnerability in an increasingly unstable world.

Contrary to many Western interpretations, Beijing does not primarily approach energy policy through the lens of the energy transition. The current crisis once again demonstrates that security remains the overriding priority. The central question facing Chinese policymakers is how to secure reliable, affordable, and politically resilient energy supplies capable of sustaining China's long-term development.

This perspective helps explain many of the apparent contradictions in Chinese energy policy. Natural gas, for instance, is frequently described as a transition fuel capable of facilitating the shift away from coal. Yet **Beijing remains reluctant to allow gas to occupy a dominant place within its future energy system**. The reason is straightforward: An increasing portion of China's gas must be imported. Whether supplies originate from Russia, Central Asia, Australia or Qatar matters less than the dependence itself. From a climate perspective, gas may be preferable to coal. From a security perspective, however, it creates vulnerabilities that Chinese policymakers are unwilling to deepen.

The debate surrounding the Power of Siberia 2 pipeline illustrates this logic particularly well. Despite the strategic partnership between Moscow and Beijing, China continues to resist excessive reliance on Russian supplies. The objective is not to replace one dependency with another, but to preserve strategic flexibility by ensuring that no supplier becomes indispensable. In this respect, **Sino-Russian gas relations reveal less about geopolitical alignment than about Beijing's determination to maintain leverage over all its energy partners**.

Oil presents an even greater strategic challenge. Unlike natural gas, where multiple sourcing provides some room for maneuver, **China's dependence on imported crude remains a structural vulnerability with more limited substitute**. The Strait of Hormuz crisis has once again demonstrated the extent to which China's economy remains exposed to instability in the Middle East, even more now that Venezuela's resources are back under US influence. Strategic petroleum reserves, state intervention, alternative transport corridors, and long-term supply contracts can cushion the impact of disruptions, but they cannot eliminate the underlying exposure.

For Chinese policymakers, the challenge extends well beyond the physical security of oil supplies. Higher oil prices affect industrial competitiveness, household purchasing power, inflation and economic growth. In an autocracy where economic stability underpins political stability, **imported oil represents not only an energy concern but also a macroeconomic and geopolitical risk**. Beyond the direct effects of higher energy costs, Chinese policymakers are equally concerned that sustained oil price shocks could trigger a broader slowdown in the global economy, weakening external demand for Chinese exports. In that sense, oil dependence represents also an indirect financial risk through China's continued reliance on international markets.

It is therefore unsurprising that Chinese debates increasingly focus on reducing the role of oil within the economy. Some analysts advocate greater use of the renminbi in global commodity markets or stronger financial instruments to reduce external exposure and as a strategic vehicle to enhance China's global power. Others argue for larger strategic reserves and more sophisticated resource governance. Yet the dominant long-term response points in another direction: electrification.

This is not primarily because electricity is cleaner, although that is clearly an important benefit. Rather, **electricity is the energy carrier over which China can ultimately exercise the greatest degree of control**. Electrifying transport, industry and buildings progressively shifts energy demand away from internationally traded hydrocarbons toward energy sources that can increasingly be produced within China's own borders. Climate objectives and energy security therefore reinforce one another, making electrification one of the policy areas where environmental and strategic interests largely converge.

> Electricity is the energy carrier over which China can ultimately exercise the greatest degree of control.

The uranium question reveals both the opportunities and the limits of this strategy. Nuclear power offers Beijing an attractive combination of low-carbon electricity generation and enhanced energy security. Yet **China's rapidly expanding reactor fleet has created another external dependency**. Domestic uranium production remains insufficient to meet future demand, forcing Beijing to secure supplies through overseas acquisitions, long-term partnerships and large strategic stockpiles. Astana's growing importance within China's uranium strategy reflects the same logic that underpins its approach to oil and natural gas, reducing concentration risk while strengthening resilience against future disruptions or opting for technologies still insufficiently financially viable.

Taken together, these three sectors reveal the defining characteristic of China's energy strategy. **Beijing is not yet capable of implementing autarky**. Complete energy independence is still far ahead but is a strategic ideal direction. Instead, China seeks to build an energy system capable of absorbing shocks, surviving disruptions and maintaining economic stability under adverse geopolitical conditions. **Diversification, redundancy, stockpiling, domestic production, overseas investments, and infrastructure development all serve this objective**.

The current crisis has demonstrated both the strengths and the limitations of this model. Strategic reserves, state-owned enterprises, centralized planning, and extensive infrastructure have allowed Beijing to weather external shocks more effectively than many other major energy importers. At the same time, structural vulnerabilities remain. Oil dependence persists. Uranium imports are likely to continue to increase. Natural gas continues to expose China to international market volatility. Most importantly, the crisis has once again highlighted the enduring tension between energy security and decarbonization. Faced with uncertainty, China has repeatedly fallen back on its most reliable domestic resource: coal. **Despite impressive progress in clean energy deployment, security and cost considerations continue to define the boundaries of what is politically acceptable**.

> The crisis has once again highlighted the enduring tension between energy security and decarbonization.

Yet this should not be interpreted as a setback for China's long-term energy transformation. If anything, the opposite appears to be true. The **lesson emerging from recent Chinese debates is that dependence on imported hydrocarbons constitutes a structural strategic weakness**. The logical response is therefore to accelerate the development of energy sources and technologies that reduce exposure to external suppliers while strengthening domestic control over the energy system.

The significance of the current crisis therefore extends far beyond temporary disruptions in oil, gas or uranium markets. It offers a window into the deeper logic shaping China's energy choices. What emerges is not simply a story about decarbonization, nor even one about technological leadership. It is the story of a great power seeking to reconcile continued economic growth with the realities of strategic vulnerability. Understanding this objective may well be the key to understanding China's energy policy—and, more broadly, its evolving conception of national security—in the decades ahead.

Michal Meidan

Head of China Energy Research at the Oxford Institute for Energy Studies

Dr. Michal Meidan is Head of China Energy Research at the Oxford Institute for Energy Studies and the Scientific Advisor for the Master in International Energy Transitions at PSIA (Paris School of International Affairs) at Sciences Po. Before joining OIES, she headed cross-commodity China research at Energy Aspects. Prior to that, she headed China Matters, an independent research consultancy providing analysis on the politics of energy in China. Dr. Meidan also held senior analytical roles at Eurasia Group in New York and London, and at Asia Centre-Sciences Po in Paris.

China Confronting its Middle Eastern Oil Dependency

China's exposure to Middle Eastern oil is enormous in absolute terms: The country relies on imports for over 70 percent of its crude oil needs, with the Middle East accounting for an estimated 37 to 45 percent of crude imports; a sizeable share of these flows transits through the Strait of Hormuz.[1] China's dependence is higher than any other importer with as much as 4-5 million barrels per day (mb/d) from the Middle East. In comparison, even though Japan imports as much as 90 percent of its crude oil from the region and Tokyo does not have Beijing's domestic alternatives such as coal or nuclear, the country's total oil consumption stood at 3.2 mb/d in 2025.

Even though the Hormuz crisis has stress-tested China's energy security policy, it has not severely disrupted economic activity in China. This is due to the existence of multiple buffers: strategic and commercial stocks—accumulated during times of lower oil prices[2]—alternative suppliers, pipeline inflows, and domestic output.[3] At the same time, the government has intervened in the domestic market to secure supplies and manage costs. While Beijing asked its largest refiner, Sinopec—that also has the most significant international exposure—to reduce its refinery throughputs, it urged independent refiners with access to discounted (and sanctioned) Iranian, Venezuelan or Russian crude to maintain output at 2025 levels.[4] The government also limited oil product exports, asked refiners to prioritize transport fuels, and managed the petrochemical shortfall in part through coal-based petrochemical production. Beijing then stepped in to limit the increase of prices at the pump, which, combined with ongoing efforts to electrify transportation, has left end-users relatively shielded from the price impact.

[1] *"七成多石油靠进口中国为啥能不慌, 原因在这"四招" [Why China isn't panicking despite relying on imports for more than 70% of its oil: Four reasons], Beijing Daily, April 25, 2026, https://news.bjd.com.cn/2026/04/25/11709907.shtml; Lian Ping, "經濟透視/高油價帶來的挑戰與機遇" [Economic perspective / Challenges and opportunities brought by high oil prices], Hong Kong Ta Kung Wen Wai, April 9, 2026, https://epaper.tkww.hk/a/202604/09/AP69d6b7a1e4b04773b06af184.html. The numbers vary based on data sources, mainly because Iranian exports to China are not reported by China's General Administration of Customs and therefore total volumes rely on alternative data providers. One analysis pegged the transit through Hormuz at 40 percent of China's oil supplies: "霍尔木兹危机教会了中国什么？——能源安全从'供应链多元化'到'算法化调度'的新逻辑" [What did the Hormuz crisis teach China? — A new logic for energy security: from 'supply chain diversification' to 'algorithmic scheduling'], 36kr, May 8, 2026, https://36kr.com/p/3800246268457476.*

[2] *Pierre Pinhas, "China's stockpiling: Domestic resilience, global influence," Institut Montaigne, January 2026, https://www.institutmontaigne.org/en/publications/chinas-stockpiling-domestic-resilience-global-influence.*

[4] *Michal Meidan, "China's crude levers", OIES Energy Comment, May 2026, https://www.oxfordenergy.org/publications/chinas-crude-levers/.*

Chinese commentators cited here all agree on the strength of China's model in mitigating physical supply shortages.[5] But they also highlight vulnerabilities. Lian Ping, Dean and Chief Economist of Guangkai Chief Industry Research Institute, argues that **China remains highly exposed because imported oil costs feed rapidly into producer (PPI) and consumer (CPI) prices**, weaken household purchasing power, and squeeze downstream firms.[6] In that vein, prices are more damaging than lost volumes as rising import costs feed into PPI and CPI, erode real incomes, and intensify pressure on investment and consumption. Xing Ziqiang, Researcher and Chief Economist at Morgan Stanley China, further estimates that every $10 rise in crude adds roughly 0.3–0.4 percentage points to PPI and 0.1–0.2 points to CPI, while shaving about 0.1 points from GDP growth.[7] So even though higher energy and food prices led to a pause in China's three-year long deflationary cycle in April,[8] macro commentators distinguish imported inflation from genuine reflation.[9] Higher oil prices may lift headline prices and temporarily interrupt deflationary expectations, but they do not solve weak demand, low confidence, or soft household income growth.

> Chinese commentators cited here all agree on the strength of China's model in mitigating physical supply shortages.

Uneven Sectoral Effects

These experts also raise the concern that the oil shock could redistribute gains and losses unevenly across the economy. **Higher oil prices improve profitability in upstream oil, gas, coal, and coal-chemical sectors**, strengthening incentives for domestic supply expansion and reinforcing the political case for energy security investment. **But they also weaken transport, aviation, logistics, chemicals, plastics, synthetic fibres**, and other midstream and downstream sectors that face both higher input costs and weak end demand, compounded by their limited ability to pass on the cost burden to end users.[10] This, in turn, reinforces an existing divide between relatively protected upstream sectors and more competitive downstream industries.

Yang Ruilong, Professor at Renmin University, Co-Director of the Institute of Economics, Co-Founder and Co-Chairman of the China Macroeconomic Forum (CMF), argues that **many downstream private firms are now more vulnerable to an oil shock than in earlier crises** because they are already trapped between overcapacity, weak pricing power, and insufficient demand.[11] The result could be further pressure on private firms and export-oriented manufacturers. This also suggests that although some price pressure could help the government's efforts to tackle "involution"—a phenomenon of exacerbated and counterproductive competition between local companies—there is also a risk that upstream supply additions will outpace demand reductions, exacerbating China's overcapacity in the refining and chemical sectors.

[5] *"七成多石油靠进口中国为啥能不慌, 原因在这"四招" [Why China isn't panicking despite relying on imports for more than 70% of its oil: Four reasons], Beijing Daily, April 25, 2026, https://news.bjd.com.cn/2026/04/25/11709907.shtml.*

[7] *Xing Ziqiang, "中东地缘冲突的全球经济冲击与中国应对" [The global economic impact of Middle East geopolitical conflicts and China's response], Sina, March 27, 2026, https://www.aisixiang.com/data/174197.html.*

[8] *"China ends over three years of factory deflation after oil shock", Bloomberg News, April 10, 2026, https://www.bloomberg.com/news/articles/2026-04-10/china-exits-factory-deflation-after-war-oil-shock-boosted-prices.*

[9] *Xing Ziqiang, Ibid.*

[10] *Lian Ping, Ibid.*

[11] *"聚焦中东地缘冲突, 能源安全与绿色转型" [Special report on the Middle East conflict, energy security and green transition], China Macroeconomic Forum, March 23, 2026, http://nads.ruc.edu.cn/zkdt/0aaebc9f1b104a8d83bd6b22ecab0feb.htm.*

Cushioning the Blow

When assessing policy solutions, some commentaries focus on short-term measures to cushion the price shock while others discuss longer-term policy tools. Lian Ping argues that Beijing should ease monetary conditions and issue targeted support for vulnerable sectors alongside stronger efforts to stabilize household demand. This links to a **deeper debate about the domestic fuel-price management mechanism**. Chinese domestic fuel prices are adjusted every ten days, based on changes in a basket of international crude prices when they range between $40-$130 per barrel. When prices exceed $130, upside adjustments are capped. But, in early April, during the Hormuz crisis, the government limited price pass-through, when Brent crude prices were at around $100 per barrel. Commentators such as Xing Ziqiang argue that this should lead to price reforms, to allow **shorter adjustment cycles**, more flexible cost pass-through, better warning mechanisms, and stronger hedging tools, combined with targeted support.

> Many downstream private firms are now more vulnerable to an oil shock than in earlier crises.

The responses required depend in part on the duration of the crisis, a point on which analysts disagree. Wang Yongzhong, a researcher at the Institute of World Economics and Politics of the Chinese Academy of Social Sciences, suggests the conflict should end relatively soon because the United States will want to avoid prolonged fuel-price pain ahead of the midterms.[12] In that reading, **China mainly needs to bridge a difficult but finite period**.

But **others expect the conflict to become a low-intensity stalemate** in which shipping insecurity, sanctions, and regional fragmentation remain embedded for years.[13] The policy implications differ substantially. If the crisis is short, stockpiles, temporary price controls, and moderate macro easing may be enough to cushion the impact.[14] If it is prolonged, then China faces higher import bills, weaker external demand, and more persistent inflationary pressure, aggravated by fossil fuel volatility. For Zou Ji, one of China's fiercest climate advocates, the conclusion is simple: **China must accelerate its energy transition**.

For commentators Wang Zengye and Wang Zhen, from China's largest oil companies, energy substitution and electrification are clearly part of the solution, but they also advocate for more active trading positions, including in critical minerals, and developing new cooperation models for energy trading and transports. For Wang Zengye, this is also an **opportunity for China to participate more actively in global governance to effectively safeguard transport routes, resource security, and energy security**.

On longer-term policy solutions, there is broad convergence. Chinese texts repeatedly advocate for larger or more actively managed strategic reserves, further diversification of import sources away from the Middle East, continued increases in domestic production, and substitution away from oil through electrification. These have been the pillars of China's oil-security strategy, and the crisis has largely reinforced them.

[12] *Wang Yongzhong, "美国是石油净出口国却仍遏制油价上涨, 原因几何?" [Why is the US curbing rising oil prices despite being a net oil exporter?], 163.com, March 19, 2026, https://www.163.com/dy/article/KODK4P8G053469LG.html,*

[13] *China Macroeconomic Forum, Ibid.*

[14] *聚焦中东地缘冲突, 能源安全与绿色转型" [Special report on the Middle East conflict, energy security and green transition], China Macroeconomic Forum, March 23, 2026, http://nads.ruc.edu.cn/zkdt/0aaebc9f1b104a8d83bd6b22ecab0feb.htm.*

Trade-Offs

But some of these suggestions are easier said than done. China already imports oil from dozens of countries and has built multiple overland and maritime supply channels, including pipelines from Russia, Kazakhstan, and Myanmar. Yet **by advocating greater reliance on overland routes, mainly from Russia, they are only raising China's exposure to another complicated geopolitical relationship**.

> China has the resource base, technology, and industrial capacity to replace a substantial share of petroleum imports.

On the demand side, China's best mitigation strategy is the continued electrification of transport (and other end-uses). This is not new. China's oil demand growth is already slowing as electric vehicles and trucks chip away at China's oil consumption.[15] But there are constraints here too: high oil prices improve the relative economics of electric vehicles (EV) and electric freight. Yet they cannot instantly overcome charging constraints or grid bottlenecks. Moreover, while the long-term direction remains accelerated electrification and renewable adoption, this will be challenging in the near term. Recent power price reforms have slowed renewable deployment, and domestic EV sales have been slowing, increasing the incentive to export.

The most contested debate concerns petrochemicals and coal. Tang Yuan, a researcher at the China Macroeconomic Research Association and at the China Policy Science Research Association, argues strongly for coal-to-methanol as a scalable substitute for imported oil,[16] claiming **China has the resource base, technology, and industrial capacity to replace a substantial share of petroleum imports over the 15th Five-Year Plan period (2026–2030)**. Coal to chemicals is a strategic insurance mechanism against maritime oil dependence or China's "trump card." While coal helps alleviate some energy security anxieties, it is ultimately a self-defeating solution as it complicates China's "dual-carbon" goals of peaking emissions by 2030 and reaching carbon neutrality by 2060.

Resource Governance, RMB, and the Bigger Strategic Question

A final strand of the Chinese debate concerns **how to integrate resource management more effectively across the whole energy system**. Several texts call for stronger coordination among stockpiling, pricing, exploration, refining, substitution, and social protection rather than treating oil security as a narrow import problem.[17] There is also an active discussion about the renminbi (RMB). A prolonged oil shock could strengthen the case for RMB settlement in oil trade with Russia and Middle Eastern suppliers, and for a larger role for Shanghai-linked pricing benchmarks. But **currency diversification does not remove exposure to physical disruption** or to the real cost of higher imported energy.

China cannot escape oil dependence, but it can actively manage it. Beijing can socialize part of the shock through stocks, pricing controls, refinery coordination, support for domestic producers, and substitution policies with an effectiveness that few importers can match. But there are still trade-offs: China can be resilient from a supply perspective while still paying a high economic price; it can diversify away from the Middle East while generating new dependencies elsewhere; and it can reduce oil vulnerability through electrification while deepening other strains in its industrial model.

[15] *China Macroeconomic Forum, Ibid.*

[16] *Tang Yuan, "关于发展煤制甲醇替代石油进口的建议" [Suggestions on developing coal-to-methanol to replace petroleum imports], Aisixiang, March 28, 2026, https://www.aisixiang.com/data/173369.html.*

[17] *Lian Ping, Ibid.*

INSTITUT Montaigne

Rosalie Klein

Project Officer - Asia Program at Institut Montaigne

Ms. Rosalie Klein joined Institut Montaigne in September 2024. She is now a Project Officer within the Asia Program. In this role, she works on climate and industrial policies in Europe and Asia. She also provides coordination support across the program's activities.

"A Crafty Rabbit Has Three Boltholes[1]": China's Strategic Caution on Russian Gas

In the last 20 years, China has undergone a profound transformation in its energy architecture, with a reduction in the share of coal in its overall energy mix, from 69 percent in 2000 to 51.4 percent in 2025.[2] However, despite an impressive renewable energy capacity deployment, it has not expanded rapidly enough to match the country's surging electricity demand, positioning natural gas as a critical element of Beijing's energy strategy. According to the International Energy Agency (IEA), China alone is expected to contribute about 25 percent of global demand growth for gas through 2030.[3] This has given a strong push to Sino-Russian relations in the past decades, whose energy cooperation revolved around gas projects, most notably Power of Siberia 1 and the Far Eastern Route. **Chinese experts increasingly portray Russian gas as useful, secure, and economically advantageous but, nevertheless, not indispensable**.

The bilateral partnership has entered a renewed phase of strategic visibility as Russian President Vladimir Putin returned to Beijing in May 2026, in a context marked by disruptions to Gulf energy flows, and Russia's continued endeavor to find alternative markets to Europe for its natural gas exports. **During the visit, both Beijing and Moscow confirmed their relationship materialized in a "comprehensive strategic partnership for the New Era" (*新时代全面战略协作伙伴*).**[4] High on Putin's agenda were natural gas cooperation and the signature of a long-delayed Power of Siberia 2 pipeline, which is supposed to redirect to China gas supplies that are no longer bought by Europe. The Kremlin sought to frame hydrocarbons and energy flows as the "locomotive" of bilateral economic cooperation, while Chinese state media emphasized the "crucial force for stability" that Sino-Russian ties represent in a volatile international environment.[5]

[1] This Chinese idiom was spoken by Feng Xuan (冯谖), a scholar and strategic advisor, to his patron, Lord Mengchang. Feng used this analogy to explain that relying on a single source of security or a single alliance leaves someone incredibly vulnerable: "Investment wisdom: 'A crafty rabbit has three burrows,'" Fidelity International, September 19, 2019, https://www.fidelity.com.hk/en/articles/inspiration-and-ideas/2019-09-16-investment-wisdom-%E2%80%9Ca-crafty-rabbit-has-three-burrows%E2%80%9D-1568598240375#:~:text=There%20goes%20a%20Chinese%20idiom,plan%20to%20fall%20back%20on.

[2] Xinghu Li, "Energy issue of pure electric vehicle in China," Research Gate, March 2010, https://www.researchgate.net/figure/Share-of-Chinese-Primary-energy-consumption-from-2000-to-2008_tbl2_325267482; Damien Ma, "China's energy security doesn't run through Hormuz but through the electrification of everything," Carnegie Endowment, April 8, 2026, https://carnegieendowment.org/russia-eurasia/posts/2026/04/chinas-energy-security-doesnt-run-through-hormuz-but-through-the-electrification-of-everything.

[3] "Gas 2025, Analysis and forecasts to 2030," International Energy Agency, October 27, 2025, https://www.iea.org/reports/gas-2025/executive-summary.

[4] President Xi Jinping and Russian President Vladimir Putin meet the press," Ministry of Foreign Affairs of the People's Republic of China, May 20, 2026, https://www.fmprc.gov.cn/eng/xw/zyxw/202605/t20260520_11914662.html.

Yet, beneath the official rhetoric of an "unprecedented" and "no limits" cooperation lies a far more cautious and asymmetric reality. While the Middle East crisis has revived the strategic appeal of overland gas infrastructure insulated from maritime chokepoints, the actual **Chinese posture remains defined less by alliance politics than by a strict commitment to diversification, bargaining leverage, and long-term energy stability**. More than deepening geopolitical alignment, the renewed expectations surrounding Power of Siberia 2 and energy cooperation thus reflects Beijing's broader effort to strengthen energy security while carefully avoiding dependence on any single supplier.

The Role of Gas in China's Energy Strategy

China's "dual-carbon" (*双碳*) mandate represents a systematic and profound restructuring of the world's largest energy production and consumption system. The compressed timeline imposes balancing long-term climate ambitions with immediate macroeconomic stability, industrial competitiveness, and energy security. It is in this context that China's central leadership has adopted a pragmatic transition philosophy: "first build, then dismantle" (*先立后破*), according to which traditional fossil fuels cannot be automatically phased out before clean, non-fossil energy alternatives are fully capable of supporting the national demand.[6]

At the centre of this strategy lies the critical role of gas. The 15th Five-Year Plan, released in March 2026, commends gas companies to proactively develop transformation and development strategies, and explore integrated multi-energy models to drive the "high-quality development" of the country's energy sector.[7] Gas is thus seen as one of many transitional sources of energy, meant to contribute to "establishing a clean, low-carbon, safe, and efficient new energy system".

This vision is widely shared by experts such as Tong Xiaoguang, an academic from the Chinese Academy of Engineering, or Zhang Yinghong, former Deputy Secretary-General of the Oil and Gas Special Committee of the China Petroleum and Chemical Industry Federation. Tong explains that many countries, including China, consider that natural gas serves as a crucial tool for both immediate air pollution control and rapid carbon mitigation: It releases 40 to 50 percent less CO_2 than coal (under equivalent calorific surplus).[8] Zhang further asserts that "the transformation of the oil and gas industry must focus on green and low-carbon development, and natural gas will serve as a key bridge in this transition" (*油气行业转型要聚焦绿色低碳，天然气将成为转型的重要桥梁*). This positions **natural gas as an "ideal partner" (*最佳伙伴*) for renewable energy**, filling the immediate supply gaps created by coal phase-outs, according to Jiang Xuefeng, Vice President of ETRI.

> Natural gas is an "ideal partner" (*最佳伙伴*) for renewable energy.

[5] *Elena Teslova, "Kremlin says Putin, Xi to discuss hydrocarbons as Russian oil exports to China jump 35%," Anadolu Agency, May 18, 2026, https://www.aa.com.tr/en/eurasia/kremlin-says-putin-xi-to-discuss-hydrocarbons-as-russian-oil-exports-to-china-jump-35-/3941227; "Xi, Putin hail 'new stage' of ties in Beijing meeting," Xinhua, May 20, 2026, https://english.news.cn/20260520/a0a61f2e0151475aa19b8b2320ff5b20/c.html.*

[6] *"习近平总书记强调的"先立后破" [General Secretary Xi Jinping emphasized the principle of "establishing before dismantling"], People's Daily, July 22, 2024, http://theory.people.com.cn/n1/2024/0722/c40531-40282311.html.*

[7] *Li Shan, Zhu Qingyu, Liu Jianxin, and Yin Jiawen, "新型能源体系下天然气利用的转型路径与融合策略研究" [Research on the transformation path and integration strategy of natural gas utilization under the new energy system], Petroleum & Petrochemical Today, March 2026, https://oversea.cnki.net/kcms2/article/abstract?v=kn2pS460sOPlCQ1qCUp3-SJqnXr5Y0uCMVfW9RJOQOwQEt7kx1TjllhXR3IFIFMX8TsrJaoIon538PfOcQppBXfixbXu_0iLWQJ8clDuYOwGge47YiYY0urHNied1EIrxBL5x9nE1NXYUAoqxBxSby8RO3E05tyIMJ7CEVTZwM_LtrHVqZuzUvIC9r8hfN6W&uniplatform=OVERSEA&language=CHS&captchaId=8e3d5374-58d0-47f0-a5b0-8efb1e6b361b#.*

[8] *"天然气将成'转型桥梁'" [Natural gas will become a "bridge for transformation"], China Petroleum Enterprise, https://www.cpezg.com/qikan/article/qkshow.html?qklwid=101.*

Against this background, in August 2024, the Chinese government revisited its natural gas utilization policy to ensure gas is reserved for households, strategic industries, and essential services, while curbing its use in petrochemicals.[9] By doing so, Beijing aims to optimize every cubic meter, reduce dependencies, and maintain flexibility in a tense global energy market.

Despite this narrative, with the start of the Strait of Hormuz crisis, China's domestic coal infrastructure was the one acting as the shock absorber during the initial disruption. **Coal thus remains the ultimate foundation of China's energy security strategy**. High extraction rates in early 2026, combined with newly commissioned coal-fired units, enabled thermal power to stabilize the grid when wind generation fluctuated and seaborne LNG supplies dried up.[10] Beijing also benefited from strong gas storage levels and unseasonably mild weather. Facing extreme spot market volatility, price-sensitive industrial consumers reduced reliance on seaborne LNG, shifting instead to pipeline imports, domestic gas production, and targeted coal substitution.

Sino-Russian Gas Relations: Strategic Cooperation or Russian Dependence?

The logic underpinning Sino-Russian gas cooperation appears straightforward. Russia possesses some of the world's largest natural gas reserves, while China is the world's largest energy importer and one of the fastest-growing gas consumers, as previously mentioned.[11] In 2024, Russia was actually China's main source of imported natural gas (pipeline and liquefied natural gas combined); Russian imports made up approximately 10 percent of China's natural gas use in 2024, up from 3 percent in 2020.[12]

Chinese planners expect to increase the role of gas as a transition fuel capable of balancing renewable intermittency while reducing pollution from coal combustion.[13] The National Development and Reform Commission (NDRC) had accordingly prioritized pipeline expansion, liquefied natural gas (LNG) terminal construction, and storage infrastructure in preparation for the country's 15th Five-Year Plan period (2026–2030).[14] Nevertheless, to manage import reliance, Beijing has expanded its coal gasification infrastructure, a process by which coal is partially oxidized by air, oxygen, steam or carbon dioxide to produce a fuel gas.[15]

Within this broader strategy, Russian pipeline gas offers several advantages from Beijing's perspective. Unlike LNG, pipeline gas transported overland is less vulnerable to maritime disruptions and geopolitical chokepoints such as the Hormuz or Malacca straits. Russian supplies are also relatively cheap compared to many LNG imports and can be directly integrated into northern China's industrial regions through existing pipeline networks. But it is important to note that Chinese commentators frequently frame this partnership through the lens of "energy security diversification" (*能源安全多元化*) rather than geopolitical alignment.[16] They often emphasize that Sino-Russian pipeline projects complete

[9] *"天然气利用管理办法" [Management measures for natural gas utilization], Government of the People's Republic of China, May 29, 2024, https://www.gov.cn/gongbao/2024/issue_11526/202408/content_6969184.html.*

[10] *"Issue 149 – Unpacking the Hormuz Crisis: Implications for energy markets and the energy transition," The Oxford Institute for Energy Studies, May 2026, https://www.oxfordenergy.org/wpcms/wp-content/uploads/2026/05/OEF-149.pdf.*

[11] *Clyde Russell, "China imports the most energy, but is best placed on Iran," Reuters, March 3, 2026, https://www.reuters.com/markets/commodities/china-imports-most-energy-is-best-placed-iran-2026-03-03/.*

[12] *Michael Ratner, Michael D. Sutherland, and Cory Welt, "Russia-China natural gas trade," US Congress, January 22, 2026, https://www.congress.gov/crs-product/IF13159.*

[13] *Michael Ratner, Michael D. Sutherland, and Cory Welt, Ibid.*

[14] *During the "15th Five-Year Plan" period, the natural gas industry is set to ignite with greater vigor," SunSirs, May 29, 2026, https://www.sunsirs.com/commodity-news/petail-33254.html.*

[15] *"Coal gasification," Science Direct, https://www.sciencedirect.com/topics/earth-and-planetary-sciences/coal-gasification#:~:text=Gasification%20of%20coal%20is%20a,combustion%20in%20a%20gas%20turbine, Accessed on June 23, 2026.*

China's "multi-corridor" import architecture, linking Central Asia, Myanmar, Russia, and maritime LNG supply routes into a diversified energy network.[17] This framing presents Russian gas as one component of China's strategy; one within a broader portfolio designed to minimize strategic vulnerability.

This distinction is crucial because the underlying asymmetry in the relationship has become increasingly difficult to ignore. Since Russia's invasion of Crimea in 2014, and especially following the full-scale invasion of Ukraine in 2022, Moscow has sought to redirect gas exports away from Europe toward Asia. China, on the other hand, retains multiple alternatives, importing gas from Turkmenistan, Uzbekistan, and Kazakhstan; purchasing LNG from suppliers such as Qatar and Australia; expanding domestic production (which represents around 60 percent of its total gas supply); and investing heavily in coal gasification technologies.[18]

The partnership increasingly resembles a structural dependency in which Moscow relies on Chinese demand far more than Beijing relies on Russian supply.

As Anne-Sophie Corbeau of Columbia University observes, "China likes diversification," while Russia, by contrast, has "few alternatives" after losing much of the European market.[19] The resulting imbalance increasingly places China in the position of a dominant buyer. In 2025, Russia exported roughly 145 bcm of gas globally, while China already absorbed around 40 bcm through Power of Siberia 1 and LNG imports combined. If Power of Siberia 2 were to reach full capacity—a milestone experts estimate could take eight to ten years—China could absorb nearly two-thirds of Russian gas exports.[20] Locking these volumes into fixed pipeline networks creates a monopsony. Far from establishing balanced interdependence, the **partnership increasingly resembles a structural dependency in which Moscow relies on Chinese demand far more than Beijing relies on Russian supply**.

[16] *Zhao Junquan and Xu Zhongsheng, "中, 俄天然气合作对双边地缘政治的影响" [The impact of China-Russia gas cooperation on bilateral geopolitics], Journal of Minghsin University of Science and Technology, Vol.46, April 2024, https://acade.must.edu.tw/admin/files/46%E5%8D%B7-%E6%98%8E%E6%96%B0%E5%AD%B8%E5%A0%B1(%E4%B8%AD%E3%80%81%E4%BF%84%E5%A4%A9%E7%84%B6%E6%B0%A3%E5%90%88%E4%BD%9C%E5%B0%8D%E9%9B%99%E9%82%8A%E5%9C%B0%E7%B7%A3%E6%94%BF%E6%B2%BB%E7%9A%84%E5%BD%B1%E9%9F%BF)e023001-%E8%B6%99%E4%BF%8A%E7%AD%8C.%E8%A8%B1%E4%BB%B2%E7%9B%9B_20230505160608.pdf.*

[17] *Li Fubing, Li Yanhua, Shen Xue, Wang Tianyuan, Li Longfei, and Zhang Lei, ""十五五"共建"一带一路"能源供需安全形势分析" [Analysis of energy supply and demand security situation for the Belt and Road Initiative during the 15th Five-Year Plan period], China Mining Magazine, Vol.35, No. 1, January 2026, http://www.chinaminingmagazine.com/cn/article/pdf/preview/10.12075/j.issn.1004-4051.20252575.pdf.*

[18] *"China – Natural gas supply," International Energy Agency, https://www.iea.org/countries/china/natural-gas. Planned coal gasification projects could eventually raise synthetic natural gas output to more than 50 billion cubic meters (bcm) per year, amounting to approximately 12 percent of China's total gas supply. Although this comes at the cost of higher emissions, heavy water consumption and significant environmental burdens in regions such as Xinjiang and Inner Mongolia, it represents a buffer against volatile global energy markets: "China revives coal-to-gas projects as energy security frays," Bloomberg, April 20, 2026, https://www.bloomberg.com/news/articles/2026-04-20/china-revives-coal-to-gas-projects-as-energy-security-frays; Nithin Coca, "China's coal conversion boom underpins security in Iran war's shadow," Asia Nikkei, April 21, 2026, https://asia.nikkei.com/business/energy/china-s-coal-conversion-boom-underpins-security-in-iran-war-s-shadow.*

[19] *"Liens économiques entre Chine et Russie : les chiffres d'une relation asymétrique" [Economic ties between China and Russia: the figures of an asymmetrical relationship], Boursorama, May 5, 2026, https://www.boursorama.com/actualite-economique/actualites-amp/liens-economiques-entre-chine-et-russie-les-chiffres-d-une-relation-asymetrique-ed5bcd2895ec66e83782e0d1771267d1.*

[20] *Sam Li and Lewis Jackson, "What is Russia's Power of Siberia 2 natural gas pipeline to China?," Reuters, September 2, 2025, https://www.reuters.com/business/energy/what-is-russias-power-siberia-pipeline-2-china-2026-05-19/; Joseph Dellatte and Rosalie Klein, "From Nord Stream to Power of Siberia: How China wins, Russia concedes, and Europe pays," Institut Montaigne, September 4, 2025, https://www.institutmontaigne.org/en/expressions/nord-stream-power-siberia-how-china-wins-russia-concedes-and-europe-pays.*

Power of Siberia 2: Still in the Pipeline

The Power of Siberia 2 (PS-2) pipeline is the most recent example of this asymmetry. Planned to stretch roughly 2,600 kilometers from Russia's Yamal Peninsula through Mongolia into northern China, the project would carry up to 50 bcm of gas annually over a thirty-year period. For Moscow, PS-2 represents a critical opportunity to redirect gas once intended for Europe.

Russian officials have repeatedly framed the project as a strategic breakthrough. During Putin's recent visit to Beijing, Kremlin aide Yuri Ushakov confirmed that PS-2 would be discussed "in great detail," while Russian officials described energy cooperation as the cornerstone of bilateral economic relations amid global instability.[21] Kremlin's Press Secretary Dmitry Peskov later said Russia and China had "reached an understanding on the project's main parameters" but "some nuances remain to be ironed out," with no clear timeframe on the project and no mention by Putin himself after the visit.

The **coverage of the PS-2 by both parties is actually quite telling**. After a legally binding memorandum was reportedly signed in September 2025, Russian media and Gazprom sources have repeatedly suggested that agreements are close, describing the memorandum enthusiastically. Chinese official communication, however, has remained notably restrained, offering few details and withholding final approval for the pipeline. China's 15th Five-Year Plan merely stated that Beijing would "advance preparatory work" related to the central route of the China-Russia gas pipeline, a formulation widely interpreted as referring to PS-2 but stopping well short of full commitment.[22]

This cautious posture reflects unresolved commercial and strategic disagreements. **Pricing remains the central obstacle**. While Gazprom requires a pricing formula that links gas to global oil indices or historical European benchmarks to offset infrastructure costs, China reportedly seeks pricing terms comparable to Russia's domestic gas prices, roughly $120–$130 per thousand cubic meters.[23]

> China is naturally not in a hurry, nor does it need to rush the negotiations.

The dispute mirrors earlier negotiations over PS-1, during which China used its diversified import options to push prices significantly lower than Russia initially demanded. Indeed, Xu Qinhua, Professor at Renmin University's School of International Relations, explains that "historically, Sino-Russian natural gas negotiations have lasted for over a decade, with the pricing mechanism remaining one of the core points of contention" (*历史上，中俄天然气谈判持续十余年，价格机制长期是核心分歧之一*).[24] Unlike Russia, which urgently needs to monetize stranded Yamal gas reserves after the collapse of European demand, "**China is naturally not in a hurry, nor does it need to rush the negotiations**."[25]

[21] *Anneik Bao, "Putin-Xi talks revive stalled Russian gas pipeline as Iran war rattles energy markets," CNBC, May 20, 2026, https://www.cnbc.com/2026/05/20/putin-xi-gas-pipeline-power-of-siberia-iran-war-.html.*

[22] *"China–Russia trade boom cools as Beijing raises the price of partnership," Insight EU Monitoring, May 19, 2026, https://ieu-monitoring.com/editorial/china-russia-trade-boom-cools-as-beijing-raises-the-price-of-partnership/1235802/.*

[23] *European contract's price was around $360 per thousand cubic meters according to Russian officials: "What the Power of Siberia 2 deal really means for Russia and China," The Moscow Times, September 4, 2025, https://www.themoscowtimes.com/2025/09/04/what-the-power-of-siberia-2-deal-really-means-for-russia-and-china-a90422; Heather L. Greenley and Michael Ratner, "Power of Siberia: A natural gas pipeline brings Russia and China closer," US Congress, April 21, 2020, https://www.congress.gov/crs-product/IF11514.*

[24] *Xu Qinhua and Wu Lan, "能源棋局大洗牌: 中俄背靠背, 能否扛住西方压力?" [A major reshuffle in the energy game: Can China and Russia withstand Western pressure?], Guancha, March 29, 2026, https://www.guancha.cn/xuqinhua/2026_03_29_811769_2.shtml.*

[25] *"俄能源部: 俄中就价格达成一致后将签署'西伯利亚力量-2'号协议" [Russian Energy Ministry: Russia and China will sign the 'Power of Siberia-2' agreement after reaching a price agreement], Tencent News, April 22, 2024, https://news.qq.com/rain/a/20240422A02S2D00?suid=&media_id=.*

Doubts also persist regarding the pipeline's route through Mongolia. Russian planners strongly favor the Mongolian corridor because it is significantly shorter and cheaper than alternative routes. Yet some Chinese analysts warn that introducing a third-party transit state exposes long-term infrastructure to potential transit fee disputes, domestic political shifts, or external diplomatic pressures within Ulaanbaatar. Concerns over transiting through Mongolia have also gained relevance following recent diplomatic developments in Central Asia. Xu considers that "the United States is attempting to influence Mongolia's stance by using economic aid as leverage, aiming to sway the project's trajectory and further complicate the tripartite game" (*与此同时，美国试图以经济援助为筹码影响蒙古立场，意图撬动项目格局，使三方博弈更趋复*).[26]

Furthermore, northern China's Bohai Rim region, where much of PS-2 gas would ultimately arrive, **is already heavily supplied through domestic production, LNG terminals, and existing pipelines**.[27] Injecting an additional 50 bcm annually into this market risks oversupply and "driving down gas prices in North China by 10-15 percent."[28] Since China's domestic gas pricing remains partially regulated, high-cost imported pipeline gas could become commercially unattractive unless Russia offers significant discounts.

Chinese analysts also remain wary of long-term geopolitical uncertainty. Pipeline projects are costly and operate over decades, and some experts, such as Zhao Lingmin, a Chinese senior media professional and international politics commentator, question Russia's future direction, particularly after Putin: "We cannot rule out the possibility that **Russia might eventually reach a compromise with the West and use the natural gas pipeline to exert pressure on China**" (*"不排除俄罗斯未来和西方妥协，利用天然气管道要挟中国的可能性"*).[29] Zhao goes further by saying: "In 2019, Putin also made it clear that he intended to 'sit back and watch the U.S. and China fight it out'; his rapprochement with China in recent years is clearly not motivated by goodwill alone" (*普京2019年也明确表示，要对中美之争[隔岸观虎斗]，近几年对中国的靠拢，显然不是好心而已*).

> "Russia might eventually reach a compromise with the West and use the natural gas pipeline to exert pressure on China."

Moreover, Zhao cautioned that **Russia continues to utilize its traditional leverage over Ulaanbaatar** to structurally contain Chinese influence: "Its strategy is to use Chinese taxpayers' money to reinforce Mongolia's role as a security buffer zone while simultaneously strengthening Russia's economic and political control over Mongolia. Given that Mongolia's leadership harbors anti-China sentiments, this further exacerbates the uncertainty surrounding the project" (*如意算盘是用中国纳税人的钱，强化蒙古国安全缓冲区的作用，同时加强了俄罗斯对蒙古国的经济和政治控制，而蒙古国的上层是有反华倾向的，这加剧了专案的不确定性*).[30] Consequently, **many Chinese experts increasingly advocate expanding existing infrastructure instead of committing immediately to PS-2**, as China has already agreed to increase flows through Power of Siberia 1 beyond its original 38 bcm annually capacity to 44, and is constructing the Far Eastern Route pipeline scheduled for completion around 2027 and planning to supply an additional 12 bcm.[31]

[26] *Xu Qinhua and Wu Lan, Ibid.*

[27] *Zhao Lingmin, "西伯利亞力量2號談判是中俄關係的一面鏡子" [The Siberian Power 2 negotiations serve as a mirror reflecting Sino-Russian relations], Master Insight, June 12, 2024, https://www.master-insight.com/article/40189.*

[28] *Zhang Xin, "历时20年, 中俄蒙这两个争议点终于谈妥了" [After 20 years, China, Russia, and Mongolia have finally reached an agreement on these two disputed issues], Guancha, September 5, 2025, https://www.guancha.cn/zhangxin4/2025_09_05_789060.shtml.*

[29] *Zhao Lingmin, Ibid.*

[30] *Zhao Lingmin, Ibid.*

LNG as a Flexibility Lever

While China's gas strategy tends to favor pipeline imports, which Beijing views as cheaper and less exposed to maritime risks, its LNG strategy also plays a critical role, as it aims to reconcile two competing objectives: **Reducing vulnerability to maritime disruptions while preserving maximum flexibility in gas procurement**. This strategy has propelled China to the rank of the world's biggest LNG importer. In 2025, China imported around 68 million tons of LNG, representing 16 percent of global trade.[32] While pipeline gas offers long-term security and predictable volumes, LNG provides a market-based balancing mechanism that can be redirected according to changing commercial and geopolitical conditions. The current import structure illustrates this logic: Pipeline gas and LNG account for 41.8 percent and 58.2 percent of China's gas imports respectively, with Russia and Turkmenistan supplying around 40 percent and 46 percent of pipeline imports, while Australia and Qatar remain the dominant LNG suppliers with shares of 34.2 percent and 23.9 percent.[33] Russia ranks fourth, accounting for 9% of China's LNG imports.[34]

> The discharge of sanctioned Arctic LNG 2 cargoes at Chinese ports is a signal.

Recent attention surrounding the discharge of sanctioned Arctic LNG 2 cargoes at Chinese ports should, therefore, not be interpreted as evidence of a fundamental shift in China's gas strategy. Chinese buyers had previously shown caution toward Arctic LNG 2 despite holding equity stakes in the project, making the acceptance of several sanctioned cargoes in August and September 2025 politically significant. Yet the broader trade data point to continuity rather than any kind of breakthrough. Indeed, while Russia delivered an unusually high monthly LNG volume to China in September 2025, placing it ahead of Malaysia as China's third-largest LNG supplier for the month, cumulative Russian LNG deliveries during the first ten months of the year remained below the previous year's levels.[35] The episode is therefore more revealing as a **signal of Beijing's willingness to test the practical limits of Western sanctions than as evidence of growing dependence on Russian LNG**.[36] The deeper trend is an increasingly asymmetric energy relationship.

Recent LNG market dynamics reinforce the value Beijing places on the flexibility options and strategic reserves that underpin its energy security. The closure of the Strait of Hormuz pushed Asian spot LNG prices sharply higher. But "China [did] not enter the market and fight for cargoes with other countries at all," said Wang Yuanda, an analyst at the consultancy ICIS.[37] Instead, Chinese firms re-exported a record 1.31 million tons of LNG during the first months of the

[31] *Zhang Xin, Ibid; Michal Meidan and Vitaly Yermakov, "China–Russia: The gas hedge," The Oxford Institute for Energy Studies, September 2025, https://www.oxfordenergy.org/wpcms/wp-content/uploads/2025/09/Comment-China-%E2%80%93-Russia-the-gas-hedge-.pdf; "中俄新建天然气管道尚无定论" [The construction of a new natural gas pipeline between China and Russia is still undecided], Sina Finance, September 5, 2025, https://finance.sina.com.cn/roll/2025-09-05/doc-infpmuwa5855041.shtml.*

[32] *Xiao Zhibo, "China's LNG imports fell 12% in 2025 despite remaining world's top buyer," ICIS, December 30, 2025, https://www.icis.com/explore/resources/news/2025/12/30/11168190/analysis-china-s-lng-imports-fell-12-in-2025-despite-remaining-world-s-top-buyer/; "Global LNG trade hits record 428 MT in 2025," Global LNG Hub, May 28, 2026, https://globallnghub.com/report-presentation/global-lng-trade-hits-record-428-mt-in-2025.*

[33] *Song Zhongwei, Zhao Yu, Gao Xiang, and Pan Jiaofeng, "中国能源韧性提升战略: 多元化布局与本土化能力建设" [Strategies for enhancing China's energy resilience: Trade-offs between diversification and localization], Bulletin of Chinese Academy of Science, January 23, 2026, http://bulletin.cas.cn/BCAS_CH/doi/10.3724/j.issn.1000-3045.20251216011;JSESSIONID=34eaf69f-2dd5-46b1-a5d2-37997f58283a.*

[34] *Sam Reynolds, "Understanding the competitive landscape for China's LNG market," Institute for Energy Economics and Financial Analysis, April 10, 2025, https://ieefa.org/resources/understanding-competitive-landscape-chinas-lng-market.*

[35] *Irina Mironova, "Seasonal strength, structural risk: Russia's LNG position in China (and the U.S. variable)," Cedigaz, November 28, 2025, https://www.cedigaz.org/seasonal-strength-structural-risk-russias-lng-position-in-china-and-the-u-s-variable/.*

[36] *Michal Meidan and Vitaly Yermakov, Ibid.*

[37] *Emily Chow and Sam Li, "In tight global market, well-positioned China resells record LNG volumes," Reuters, April 1, 2026, https://www.reuters.com/business/energy/tight-global-market-well-positioned-china-resells-record-lng-volumes-2026-04-01/.*

year, taking advantage of high prices while relying on domestic production, inventories, and growing pipeline imports to meet domestic demand.

The Hormuz Crisis: A Reshuffling of the Deck for Russia?

The recent conflict in the Strait of Hormuz has nevertheless helped Putin's case by reviving the strategic logic behind overland energy corridors. The closure of Hormuz disrupted nearly a fifth of global LNG trade, half of China's oil imports and nearly a third of its LNG supply.[38] Because China remains heavily dependent on Gulf oil and LNG imports, the crisis reinforced long standing Chinese concerns regarding maritime vulnerability. Xu confirms this trend, writing that "[China's] structural dependence could potentially escalate into strategic vulnerability in extreme circumstances. **Land-based pipeline supply can effectively mitigate such risks**" (*这一结构性依赖在极端情况下可能演变为战略脆弱性，陆上管道供应可有效规避此类风险*).[39]

> "Land-based pipeline supply can effectively mitigate maritime risks."

This development has strengthened Moscow's argument for PS-2. Russian officials increasingly frame pipeline cooperation as a solution to geopolitical instability, emphasizing Russia's reliability as an overland supplier immune from maritime disruptions.[40] Nevertheless, Chinese analysts continue emphasizing that diversification is the cornerstone of Beijing's energy strategy. Preserving a diversified import portfolio also allows Beijing to retain the option of increasing U.S. energy purchases as a potential bargaining tool in managing relations with the Trump administration.[41] Additionally, replacing maritime vulnerability with excessive dependence on Russian pipeline infrastructure would merely substitute one strategic exposure for another. From this perspective, the ideal energy architecture is redundancy across multiple systems.[42] China has notably been deepening energy cooperation with Central Asian suppliers, particularly Turkmenistan. Actually, last April, while Russian Foreign Minister Lavrov was in Beijing advocating for the Power of Siberia-2 pipeline, Chinese Vice Premier Ding Xuexiang was in Turkmenistan securing agreements to deepen gas cooperation with China's second-largest pipeline gas supplier.[43] Furthermore, Beijing retains substantial gas reserves,[44] a rising domestic production, and extensive coal resources. It is therefore capable of mitigating short-term supply shocks.

Dong Xiucheng, Executive Dean of the Institute for International Carbon-neutral Economy at the University of International Business and Economics, argues that **disruptions to shipping through the Strait of Hormuz functioned as a "stress test" for China's energy security system**, revealing its resilience while also creating opportunities for structural reform (*霍尔木兹海峡航运受阻带来的能源供应冲击是一场'压力测试'，既检验了我国能源安全保障体系的韧性与底气，　也进一步助推我国将危机转化为结构性调整的契机*).[45] If anything, the crisis might have reinforced Xi's priority: The need to avoid relying on a single source of supply.

[38] *"World oil transit chokepoints," US Energy Information Administration, Last updated on March 3, 2026, https://www.eia.gov/international/analysis/special-topics/World_Oil_Transit_Chokepoints.*

[39] *Xu Qinhua and Wu Lan, Ibid.*

[40] *"Has the Iran war sealed the fate of Power of Siberia 2?," The Moscow Times, May 13, 2026, https://www.themoscowtimes.com/2026/05/13/has-the-iran-war-sealed-the-fate-of-power-of-siberia-2-a92672.*

[41] *Joseph Dellatte and Rosalie Klein, Ibid.*

[42] *Song Zhongwei, Zhao Yu, Gao Xiang, and Pan Jiaofeng, Ibid.*

[43] *The Moscow Times, Ibid.*

[44] *Pierre Pinhas, "China's stockpiling: Domestic resilience, global influence," Institut Montaigne, January 2026, https://institutmontaigne.org/ressources/pdfs/publications/note-chinas-stockpiling-domestic-resilience-global-influence.pdf.*

[45] *Dong Xiucheng, "全球油气'主动脉'断航, 考验中国能源安全" [The disruption of global oil and gas "main arteries" tests China's energy security], University of International Business and Economics, May 8, 2025, https://news.uibe.edu.cn/info/1371/133998.htm.*

The Future of Sino-Russian Gas Relations

China's gas strategy is turning the country into "the world's largest swing player."[46] And Sino-Russian gas relations highly depend on this dynamic, since the implications of China's energy transition for future gas demand remain unclear. As China expands renewable energy capacity, strengthens domestic gas production, develops coal-to-gas technologies, and diversifies import routes, **it remains difficult to predict how much additional LNG or pipeline gas Beijing will require in the long run**.

China's energy self-sufficiency has already been standing at approximately 85 percent since 2024.[47] Looking more specifically at gas, the projections for 2030 estimate that China's gas consumption will be 500 bcm per year, while its domestic production will reach 300 bcm, maintaining the reliance on imports at roughly 40 percent.[48] This indicates a plateau: China is expected to remain dependent on imports in the short to mid-term but without becoming increasingly so.

> There is a "political ceiling" on further external exposure.

This helps explain Beijing's strategic posture. As the scientist Du Xiangwan[49] notes, "[China's] reliance on imported oil and natural gas has long been high, and it is unlikely we will import even more" (*我们油和气对外依存度已经很高了，不大可能进口更多的油和气*).[50] It seems like there is a **"political ceiling" on further external exposure**. China accepts sustained import dependence in the short to middle-term, but seeks to cap vulnerability by spreading supply across multiple external partners. In this landscape, **the central question for Sino-Russian relations is how much more time China will continue to need Russia**.

[46] *Michal Meidan and Vitaly Yermakov, Ibid.*

[47] *Zheng Xin, "Energy self-sufficiency rate reaches 85%," China Daily, December 17, 2024, https://www.chinadaily.com.cn/a/202412/17/WS6760d927a310f1265a1d34c6.html; Zheng Xin, "China's energy self-sufficiency rate to hit 84.6%," China Daily, February 3, 2026, https://global.chinadaily.com.cn/a/202602/03/WS6981ddcea310d6866eb37431.html.*

[48] *Li Fubing, Li Yanhua, Shen Xue, Wang Tianyuan, Li Longfei, and Zhang Lei, Ibid.*

[49] *Du Xiangwan is more precisely an expert in applied physics, high-power laser technology, and energy strategy. He is a former Vice President of the Chinese Academy of Engineering, Senior Scientific Advisor at the China Academy of Engineering Physics, Vice Chairman of the National Energy Expert Advisory Committee, Chairman of the Expert Committee for the National Pilot Program on Waste-Free City Construction, and Advisor to the National Expert Committee on Climate Change.*

[50] *"统筹好新能源发展和国家能源安全——访中国工程院院士, 国家能源咨询专家委员会副主任杜祥琬" [Coordinating new energy development with national energy security—An interview with Du Xiangwan, Academician of the Chinese Academy of Engineering and Deputy Director of the National Energy Advisory Expert Committee], April 6, 2024, http://www.ncsc.org.cn/xwdt/gnxw/202404/t20240406_1070041.shtml.*

Manon Anderson

Assistant Project Officer - Asia Program at Institut Montaigne

Ms. Manon Anderson is an Assistant Policy Officer within Institut Montaigne's Asia Program. Her work focuses on topics related to economic security in EU-China relations, and on understanding Chinese industrial policies by using Chinese sources. Ms. Anderson has a Double-Master's degree from Sciences Po and from Fudan University.

Pierre Pinhas

Policy Fellow - Asia Program at Institut Montaigne

Mr. Pierre Pinhas joined Institut Montaigne in February 2023 as a Project Officer within the Asia Program. He is in charge of China Trends, which seeks, on the basis of Chinese sources, to understand China's geopolitical, economic or energy issues. His research and work further focus on European and Asian countries' raw materials policies and their stockpiling strategies.

Uranium Supply: A Fusion of Kazakhstan, New Partners and Domestic Production

"Over the past 60 years, several generations of nuclear industry professionals have worked tirelessly and pioneered innovations, propelling China's nuclear industry from nothing to something" (*60来，几代核工业人艰苦创业，开拓创新，推动我国核工业从无到有*) declared Xi Jinping in 2015.[1] Indeed, beyond the military uses of the atom that were a key goal, China has overhauled its energy sector in recent years, cementing its position as the global leader in electricity generation, including through the nuclear option. By focusing on cutting down the sector's high-polluting coal and fossil fuels, Beijing has elevated nuclear power to an important position on its strategic energy roadmap.[2] But what can be said of the CCP leadership's level of confidence regarding uranium supply, the commodity fueling this source of energy?

Indeed, while China has successfully established itself as the world's leading supplier of wind and solar infrastructure, its escalating nuclear ambitions face a severe domestic bottleneck. Despite its vast geographic footprint, the country suffers from a deficit of high-grade uranium reserves, earning it the **moniker of a "uranium-poor nation" (*贫铀国家*)**.[3] This has forced Beijing into a severe external

[1] *"习近平就我国核工业创建60周年作出重要指示" [Xi Jinping issues important instructions on the 60th anniversary of the founding of my country's nuclear industry], People's Daily, January 15, 2015, http://politics.people.com.cn/n/2015/0115/c70731-26393604.html; "坚持创新发展 全面建设核工业强国" [Adhere to innovative development and comprehensively build a nuclear industry power], Qiushi, February 1, 2023, https://www.qstheory.cn/dukan/qs/2023-02/01/c_1129324680.htm.*

[2] *Li Aijun and Lin Boqiang, "Comparing climate policies to reduce carbon emissions in China," Energy Policy, Vol.60, September 2013, https://www.sciencedirect.com/science/article/abs/pii/S0301421513002942. Guo Xiaopeng and Guo Xiaodan, "Nuclear power development in China after the restart of new nuclear construction and approval: A system dynamics analysis," Renewable and Sustainable Energy Reviews, Vol.57, May 2016, https://www.sciencedirect.com/science/article/abs/pii/S1364032115015737.*

resource dependency. China's reliance on foreign raw uranium skyrocketed from 0 percent in 2000 to 83.3 percent by 2021, leaving it heavily exposed to a concentrated group of exporters, primarily Kazakhstan, Russia, Canada, and Australia.[4]

> The country suffers from a deficit of high-grade uranium reserves, earning it the moniker of a "uranium-poor nation."

This vulnerability is poised to intensify alongside the country's appetite for nuclear fuel: Domestic demand for raw uranium is projected to scale from 13,132 tons annually in 2024[5] to over 40,000 tons by 2040.[6] In response to this threat, Beijing formalized a resource security framework in the early 2000s to ensure that long-term supply matches its growing demand. **Following the "three one-third" principle (三个三分之一), China aims to divide its uranium requirements across three distinct pillars:** domestic production, overseas acquisitions, and international purchases.

From Self-Sufficiency to Import Reliance: The Evolution of China's Uranium Strategy

From the 1950s to the 1990s, China's uranium production was sufficient to meet the country's demand. In the mid-1980s, the country initiated its civil nuclear power programme with the construction of its first nuclear power plant, Qinshan I, which started operating in 1991.[7] Subsequently, China's demand for uranium increased exponentially: By 2011, needs had been multiplied by 85 relative to 1991 levels, rising from 50 tons to 4,250 tons. Consequently, the country's domestic production—though geologically existing—progressively proved inadequate to meet its new uranium consumption demands. Indeed, Chinese production only multiplied by 1.75 during the same period, from 800 tons in 1991 to 1,400 tons in 2011. In the words of Yang Yueping and Wang Ping, two scholars from University of South China in Hunan, endogenous production exhibited negligible growth.[8]

Consequently, as mentioned earlier, China's reliance on external suppliers for uranium increased from 0 percent in 2001 to 83.3 percent in 2021 according to data assembled by Yang and Wang—approaching the global uranium import dependency rate of 88 percent. Within a decade, China has therefore transitioned from a position of net exporter to that of a more vulnerable importer, including on enriched uranium from Russia.[9] In 2011, the country imported

[3] *"别再误以为中国贫铀 这项核心技术 让我们彻底突围" [Don't mistakenly believe that China's depleted uranium technology will allow us to completely break through the current limitations], China Now, March 28, 2026, https://mp.weixin.qq.com/s/9sVZqDNatLW8vPW-awP4_Q.*

[4] *Yang Yueping and Wang Ping, "核电事业发展中我国铀资源对外依存度探讨" [A discussion on my country's dependence on foreign uranium resources in the development of nuclear power industry], University of South China, October 31, 2023, https://mp.weixin.qq.com/s?__biz=MzU5N-zU1MzY2Mw==&mid=2247489191&idx=1&sn=3bdfbc26c5e2ac46a7a879bf313bce56&chksm=ff3772dc4a6d57b3e44707e7c74c86f26d87c0f1e-8c6e3695f9dbb1559495a7a4e3a575ce6ab&scene=27.*

[5] *Tong Zhang, Xin Yang, Liang Yuan, et al., "Investigation on evolution characteristic of dynamic pore and reactive transport of leaching solute in uranium-bearing sandstone during in-situ alkaline leaching mining: An in-situ LF-NMR leaching experiment," Nuclear Engineering and Technology, Vol.57, No.12, December 2025, https://www.sciencedirect.com/science/article/pii/S1738573325004322.*

[6] *"China's nuclear fuel cycle," World Nuclear Association, Last updated April 25, 2024, https://world-nuclear.org/information-library/country-profiles/countries-a-f/china-nuclear-fuel-cycle.*

[7] *Zhou Ping "Nuclear power development in China," International Atomic Energy Agency, 1987, https://www.iaea.org/sites/default/files/29204784346.pdf.; "Long-term operation of China's oldest reactor assessed," World Nuclear News, May 17, 2019, https://www.world-nuclear-news.org/Articles/Long-term-operation-of-China-s-oldest-reactor-asse.*

[8] *Yang Yueping and Wang Ping, Ibid.*

[9] *Richard Weitz, "China's uranium quest part I: Domestic shortages fuel global ambition," Jamestown, December 8, 2011, https://jamestown.org/chinas-uranium-quest-part-i-domestic-shortages-fuel-global-ambition/.*

approximately 15,000 tons of raw uranium.[10] Such a trend benefited first and foremost Canada, Australia and Kazakhstan. Consequently, Beijing was compelled to rapidly identify a solution to address its growing uranium needs and dependencies.

> China's reliance on external suppliers for uranium increased from 0 percent in 2001 to 83.3 percent in 2021.

Securing Uranium Through "Every Possible Channel"—Kazakhstan Especially

Since the early 2000s, China has promulgated a series of regulations and roadmaps[11] pertaining to nuclear energy, whilst simultaneously emphasizing its quest for uranium. The PRC has adopted a robust policy agenda to propel the development of its nuclear industry, starting with the Medium- and Long-term Nuclear Power Development Plan (2005-2020) (*核电中长期发展规划*), which marks the beginning of its accelerated growth in nuclear power capacities.[12]

Concurrently, the CCP has placed mounting emphasis on uranium, demonstrating a strategic intent to diversify its supply sources. The PRC's uranium procurement strategy is guided by the principle of **"engaging both domestic and international markets and utilising both domestic and foreign resources"** (*面向两个市场,利用两种资源*).[13] This is based on the **"three one-third" principle**[14] (*三个三分之一*)—also known as the four-in-one (*四位一体*) should strategic stockpiles be added.[15] Looking at China's research on nuclear waste recycling, whether it be plutonium or low grade uranium,[16] one could also now add innovation in recycling. This principle equates to having one third of uranium sourced domestically, one third acquired from overseas acquisitions and one from direct international purchases. As a China National Nuclear Corporation (CNNC) marketing manager observed already back in 2010, China seeks to acquire uranium from "every possible channel",[17] thereby establishing the tenor for the subsequent decade of endeavours to ensure supply.

[10] *"内蒙古发现国内最大世界级铀矿 核电重启获保障" [Inner Mongolia discovers China's largest world-class uranium mine, ensuring the restart of nuclear power plants], CE.cn, November 6, 2012, http://district.ce.cn/newarea/roll/201211/06/t20121106_23820061.shtml.*

[11] *To name a few: Medium- and Long-term Nuclear Power Development Plan (2005-2020) (中长期核电发展规划) (2007); Nuclear Power Safety Plan (2011–2020) (核电安全规划) and Medium- and Long-Term Development Plan for Nuclear Power (2011–2020) (核电中长期发展规划(2011~2020年) (核电中长期发展规划(2011~2020年)) (2012); Nuclear Safety Law (核安全法) (2017); 14th Five-Year Plan for Modern Energy System ("十四五"现代能源体系规划) and Energy Law of the PRC (中华人民共和国能源法) (2024); Atomic Energy Law (原子能法) (2025).*

[12] *Guo Xiaopeng and Guo Xiaodan, "Nuclear power development in China after the restart of new nuclear construction and approval: A system dynamics analysis," Renewable and Sustainable Energy Reviews, Vol.57, May 2016, https://www.sciencedirect.com/science/article/abs/pii/S1364032115015737.*

[13] *"察布查尔锡伯自治县国民经济和社会发展第十三个五年规划" [The 13th Five-Year Plan for National Economic and Social Development of Chabuchar Xibe Autonomous County], Chabuchar County People's Government, January 20, 2016, https://www.xjcbcr.gov.cn/xjcbcr/c115367/202311/36364d83d1f84a9ab3be9a2961dd8422.shtml.*

[14] *Liu Yiyu, "CNNC begins trials at uranium mine in Niger," China Daily, March 24, 2011, https://www.chinadaily.com.cn/business/2011-03/24/content_12220006.htm; "中哈合资核燃料厂预计后年投产 产品将于国内市场和海外出口" [The Sino-Kazakh joint venture nuclear fuel plant is expected to start production the year after next, with products to be sold domestically and exported overseas], Energy World, May 11, 2017, https://www.nengyuanjie.net/show-67-105891-1.html.*

[15] *"中国战略性矿产——铀" [Uranium, a strategic mineral in China], Seventh Geological Team of Guizhou Provincial Bureau of Nonferrous and Nuclear Industry, December 25, 2025, https://mp.weixin.qq.com/s/jGjNLz2oYzOdveB5t4SLFw.*

[16] *Indeed, China's self-sufficiency could be significantly improved by reprocessing waste to manufacture MOX fuel for existing power plants. This would require a titanic industrial infrastructure, akin to that of French company Orano in La Hague. Beyond the prohibitive costs of MOX compared to uranium, Beijing ran into popular resistance. In 2016, protests by the residents of Lianyungang (Jiangsu) against Areva's (ex-Orano) project forced the regime to back down and China moved its plans to Jinta (Gansu): Zhang Hui, "On China's nuclear fuel cycle," The Belfer Center, December 6, 2021, https://www.belfercenter.org/sites/default/files/pantheon_files/files/publication/NASEM-talk2021_hzhang.pdf. This is far from an isolated episode in China's nuclear energy expansion but it highlights possible (social) impacts of the "Not in My Backyard" (NIMBY) phenomenon (邻避效应) for China's nuclear expansion: Jiu Liu, "Prevention and control on urban NIMBY caused by nuclear facilities in China," Journal of Physics, Vol.1419, 2019, https://iopscience.iop.org/article/10.1088/1742-6596/1419/1/012033/pdf.*

[17] *"Rising from the ashes," The Economist, April 8, 2010, https://www.economist.com/science-and-technology/2010/04/08/rising-from-the-ashes.*

Despite relatively limited references to uranium in policy documents in comparison to the extensive discourse surrounding the broader issue of nuclear power expansion particularly, China's strategic shift in uranium supply management is evident in its relationship with Kazakhstan. Astana has emerged as China's **most important partner** in this domain, which is no coincidence considering the country is the world's leading uranium producer since 2009 and accounted for approximately 40 percent of global uranium output in 2025.[18]

Bilateral cooperation dates back to 2006, when Kazakhstan's state owned company Kazatomprom and China General Nuclear (CGN) signed a strategic partnership agreement. This marked the beginning of a sustained expansion of cooperation across the nuclear fuel cycle. Subsequent agreements in 2007 and 2008 covered uranium supply, long-term trade and fuel fabrication, and Chinese participation in uranium mining projects.[19] Chinese companies progressively acquired stakes in key Kazakh uranium assets. A CNNC subsidiary acquired a 49 percent stake in the Zhalpak deposit, while CGN's subsidiary Sino-Kazakhstan Uranium Resources Investment Co. acquired 49 percent stakes in the Irkol and Semizbay deposits through the Semizbay-U joint-venture.[20]

This partnership has been strongly supported by **institutional cooperation**. In 2014, the two countries signed an agreement on "extensive and more intensive mutual cooperation" in nuclear power.[21] This agreement resulted in **cooperation being expanded downstream**, with the establishment of another joint-venture in Kazakhstan to produce nuclear fuel assemblies, with a capacity of 200 tons per year.[22] In 2015, China and Kazakhstan announced the establishment of a $2 billion (€1.8 billion)[23] fund for bilateral projects within the framework of the BRI.[24] More recently, **cooperation has continued to intensify**: In 2021, Kazatomprom signed new long-term supply contracts with Chinese partners,[25] and by the end of 2024, Chinese companies had acquired additional stakes in Kazakh uranium assets from Russia's Rosatom,[26] alongside Kazatomprom's $2.5 billion (€2.35 billion)[27] uranium supply deal with Beijing.[28]

These agreements have enabled China to secure increasing amounts of uranium. A 2010 deal between Kazatomprom and CGN enabled Beijing to secure 24,200 tons of uranium through 2020,[29] followed by another one in 2011 giving China another 55,000 tons of uranium over the following decade.[30] At the same time, Kazakhstan expanded its exports of higher value-added products: Uranium fuel pellet shipments to China increased from just 2 metric

[18] *"Uranium and nuclear power in Kazakhstan," World Nuclear Association, Last updated on June 11, 2026, https://world-nuclear.org/Information-Library/Country-Profiles/Countries-G-N/Kazakhstan.*

[19] *Genevieve Donnellon-May, "Powering China's nuclear ambitions," The Diplomat, September 20, 2022, https://thediplomat.com/2022/09/powering-chinas-nuclear-ambitions/.*

[20] *Yang Yueping and Wang Ping, Ibid.*

[21] *"Kazakhstan and China agree to cooperation in nuclear power," World Nuclear News, December 15, 2014, https://www.world-nuclear-news.org/Articles/Kazakhstan-and-China-agree-to-cooperation-in-nucle.*

[22] *"Operating and financial review six months ended 30 June 2025," Kazatomprom, August 22, 2025, https://www.kazatomprom.kz/storage/3c/6m_2025_ofr_eng.pdf.*

[23] *At the December 14, 2015 US dollar-euro exchange rate.*

[24] *China pledges $2 bln for "capacity cooperation" fund with Kazakhstan – Xinhua," Reuters, December 14, 2015, https://www.reuters.com/article/markets/china-pledges-2-bln-for-capacity-cooperation-fund-with-kazakhstan-xinhua-idUSL3N143459/.*

[25] *Uranium and nuclear power in Kazakhstan, World Nuclear Association, Ibid.*

[26] *"Russia sells stakes in some Kazakh uranium deposits to China," Reuters, December 17, 2024, https://www.reuters.com/markets/commodities/russia-sells-out-vast-kazakh-uranium-deposits-china-2024-12-17/.*

[27] *At the November 18, 2024 US dollar-euro exchange rate.*

[28] *Vagit Ismailov, "Chinese companies to purchase uranium concentrates from Kazatomprom for $2.5 billion," The Times of Central Asia, November 18, 2024, https://timesca.com/chinese-companies-to-purchase-uranium-concentrates-from-kazatomprom-for-2-5-billion/.*

[29] *China's nuclear fuel cycle," World Nuclear Association, Ibid.*

[30] *"Operating and financial review six months ended 30 June 2025," Kazatomprom, August 22, 2025, https://www.kazatomprom.kz/storage/3c/6m_2025_ofr_eng.pdf.*

tons in 2008 to 200 metric tons by 2013-2014.[31] Recent trends further underscore Kazakhstan's central role in China's uranium supplies. By 2023, approximately two-thirds of Kazatomprom's sales were directed to customers in Kazakhstan, Russia and China combined, up from roughly one-third in 2021. In 2023, around half of the country's exports were destined to China,[32] while in 2024, roughly two-thirds of China's uranium intake came from Kazakhstan reversely! Another strategic piece to this mature cooperation: The two countries have initiated discussions on developing a uranium transport link to Shanghai.[33] Beyond the issue of uranium, Astana and Beijing have recently signed a protocol on the peaceful use of atomic energy, with the aim of deepening their strategic partnership in the field of civil nuclear energy.[34]

A Radiant Future for Domestic Production and Exploration?

As part of China's systemic self-reliance push, the third pillar of the "three one-third" principle is of interest. Indeed, inside China, **official voices and industry insiders project an ambitious future for the country's domestic production capacity**. The 2.8 million tons of uranium identified across its vast territory, according to an official evaluation of potential resources in 2022, gives hope. Extracting the ore from the ground at a cost lower than the market prices is another story.[35] But Beijing appears to be on the fast track to total resource self-sufficiency according to Peng Wenhao, a Senior Researcher at Puhua Management Consulting, who asserts **China's uranium industry will transition from "resource dependency" (*资源依赖*) to "technological self-reliance" (*技术自主*) from 2024 to 2030**.[36]

> Official voices and industry insiders project an ambitious future for the country's domestic production capacity.

This optimism is backed by efforts to develop domestic exploration and mining infrastructure. One example of this is the demonstration project in Inner Mongolia's Ordos Basin. As China's largest natural uranium production base by capacity, the facility produced its first batch of material in July 2025—all the more so just one year after the facility broke ground, setting a national record for natural uranium production.[37] According to CNNC, the technology[38] used at Ordos will be used to accelerate extraction across other major Northern basins, such as Songliao, Erlian, Jingchuan, and Yili, and will eventually be deployed in overseas projects.[39]

[31] *Nariman Gizitdinov, "Kazatomprom targets jump in uranium pellet exports to China," Bloomberg, August 22, 2011, https://www.bloomberg.com/news/articles/2011-08-22/kazatomprom-aims-to-boost-uranium-pellet-sales-to-china-100-fold.*

[32] *"欧美能源公司发愁: 哈萨克斯坦的铀都卖给中俄了, 我们快没的用了" [Yang Yueping, from the European and American energy company, is worried: Kazakhstan has sold all its uranium to China and Russia, and we're almost out of it], Guancha, February 2, 2025, https://www.guancha.cn/internation/2025_02_18_765432_s.shtml; Pan Yanliang, "To secure Kazakhstan's uranium, Chinese players were compelled to accommodate local partners," Carnegie Endowment, March 26, 2024, https://carnegieendowment.org/posts/2024/07/to-secure-kazakhstans-uranium-chinese-players-were-compelled-to-accommodate-local-partners; "Demand for uranium is booming. Who is benefiting?," The Economist, July 4, 2024, https://www.economist.com/asia/2024/07/04/demand-for-uranium-is-booming-who-is-benefiting; Marco Siddi and et Kristiina Silva, "Russia and Kazakhstan in the global nuclear sector: From uranium mining to energy diplomacy," Finnish Institute of International Affairs, October 2023, https://fiia.fi/en/publication/russia-and-kazakhstan-in-the-global-nuclear-sector.*

[33] *The Economist, Ibid.*

[34] *Ulviyya Poladova, "Kazakhstan, China sign protocol on peaceful use of atomic energy," Azernews, June 16, 2026, https://www.azernews.az/region/259829.html.*

[35] *Rachel Cheung, "Beijing's uranium edge," The Wire China, March 2, 2025, https://www.thewirechina.com/2025/03/02/beijings-uranium-edge-china/.*

[36] *Peng Wenhao, "2025中国铀矿市场: 供需缺口扩大, 进口依赖度逼近'安全红线'" [2025 China uranium market: Supply-demand gap widens, import dependence approaches "safety red line"], ChinaIRN.com, August 8, 2025, https://www.chinairn.com/scfx/20250808/175900677.shtml.*

[37] *"'国铀一号'示范工程生产出第一桶铀" [The "Guoyou-1" demonstration project produced its first barrel of uranium], CE.cn, July 13, 2025, http://www.ce.cn/cysc/newmain/yc/jsxw/202507/t20250713_2404623.shtml.*

[38] *This technology refers to CO_2 and O_2 leaching in-situ, a process which allows the ores to be processed for uranium without lifting them to the surface. It is said to avoid the generation of water, gas and solid wastes, thus resulting in a minimised amount of carbon emissions.*

State media frequently frame these milestones as a **definitive victory over resource vulnerabilities**. The patriotic broadcast China Now (*这就是中国*) declared in March 2026 that "every stage has achieved self-reliance and full control"—from uranium resource exploration and mining to fuel assembly processing, equipment manufacturing, and decommissioning (*从铀 资源的勘察，采演到核燃料组件的加工， 从设备制造到工程建设， 从运行管理到退役处置, 每一个环节都实现了自主可控*).[40] The media even claim that China is bypassing its traditional uranium constraints through a successful thorium-uranium conversion in its molten salt reactor, touted as the only such reactor currently in operation globally to successfully run on thorium fuel.[41] Thorium is significantly more abundant and accessible than uranium. It is currently estimated that a single mine tailing site in Inner Mongolia contains sufficient thorium to power China for more than 1,000 years for instance.[42] This enthusiasm has spilled over into financial markets; boosted by the success of the Ordos project, CNNC's subsidiary, China National Uranium, raised 4.43 billion yuan (€532 million)[43] in December 2025 on the Shenzhen stock exchange, with shares soaring by over 200 percent on opening day.[44] This paradoxical surge underscores the disconnect between market enthusiasm and China's actual inability to cover its nuclear ambitions with domestic resources.

Despite these triumphalists reports, **the empirical reality of China's domestic uranium supply tells a very different story**. In 2020—the exact year Zhou Rongsheng predicted China would capture a third of global production—domestic output reached just 1,885 tons, representing a meager 3.9 percent of the world total.[45] By 2021, the increase in annual uranium production failed to keep pace with growing domestic demand, resulting in a shortfall of 7,963 tons.[46] **Rather than marching toward self-sufficiency, China's domestic extraction has actually stagnated**. The long-term trend reveals a stark vulnerability: Between 2002 to 2024, the share of domestic production meeting China's total uranium requirements plummeted from 92.4 percent to just 12.2 percent.[47]

> Despite triumphalists reports, the empirical reality of China's domestic uranium supply tells a very different story.

This structural deficit further brings the focus to **Beijing's strategic stockpiles**. While access to granular state reserve data remains limited, import numbers have started outpacing the country's immediate operational consumption needs. The World Nuclear

[39] *"China's largest uranium mining project enters production," World Nuclear News, July 15, 2025, https://www.world-nuclear-news.org/articles/chinas-largest-uranium-mining-project-enters-production.*

[40] *"这就是中国 第324期: 中国核电 '从白手起家"到"走向世界"' [China New, Episode 324: China's nuclear power: From "starting from scratch" to "going global"], Youtube, March 24, 2026, https://www.youtube.com/watch?v=uC4VNpnH8r0&list=PLGjsh-EBqdUO9fBW0pORjvHUl7tEFoK5p&index=19.*

[41] *"骄傲转发! 我国打破核电对铀的依赖" [Proudly share this! My country breaks its dependence on uranium for nuclear power], Sina Finance, November 1, 2025, https://finance.sina.com.cn/stock/wbstock/2025-11-01/doc-infvwwir4571791.shtml; "核能发电可以不用'烧'铀了" [Nuclear power generation can now be achieved without burning uranium], CE.cn, November 20, 2025, http://www.ce.cn/xwzx/gnsz/gdxw/202511/t20251120_2590258.shtml.*

[42] *Stephen Chen, "China reaches energy independence milestone by 'breeding' uranium from thorium," South China Morning Post, November 3, 2025, https://www.scmp.com/news/china/science/article/3331312/china-reaches-energy-independence-milestone-breeding-uranium-thorium.*

[43] *At the December 3, 2025 renminbi-euro exchange rate.*

[44] *Kenji Kawase, "Beijing's key uranium miner soars over 200% in $628m Shenzhen listing," Asia Nikkei, December 3, 2025, https://asia.nikkei.com/business/markets/ipo/beijing-s-key-uranium-miner-soars-over-200-in-628m-shenzhen-listing.*

[45] *"World uranium mining production," World Nuclear Association, Last updated on January 20, 2026, https://world-nuclear.org/information-library/nuclear-fuel-cycle/mining-of-uranium/world-uranium-mining-production.*

[46] *Yang Yueping and Wang Ping, Ibid.*

[47] *From 2002 to 2021: Yang Yueping and Wang Ping, Ibid. For China's total uranium requirements in 2024: "World nuclear power reactors & uranium requirements," World Nuclear Association, Last updated on June 16, 2026, https://world-nuclear.org/information-library/facts-and-figures/world-nuclear-power-reactors-and-uranium-requireme. For China's domestic production of uranium in 2024: Uranium production by country—World Nuclear Association, Ibid.*

Association estimates that China's uranium stockpile stood at 132,000 tons in 2022, triple that of the United States. Official customs data versus actual needs divergence has persisted: In 2023, China imported 17,841 tons,[48] produced 1,600 tons,[49] required 11,303 tons—and thus likely stockpiled the extra 8,138 tons.[50] This surplus is once again an example of Beijing slowly building a safety net to protect its nuclear industry from external geopolitical shocks.

Renewed Diversification Abroad, Further Securitization at Home

Several challenges explain China's difficulty in approaching uranium self-sufficiency. Peng frames this as a dual crisis: **a simultaneous "battle to safeguard resource security" (*资源安全保卫战*) and a "struggle for technological self-reliance" (*技术自主攻坚战*)**.[51] With the internationally recognized safety threshold for external resource dependency set at 50 percent he refers to, China's 83 percent exposure leaves its energy security highly vulnerable to geopolitical flashpoints. A perfect example occurred during the 2022 invasion of Ukraine, which triggered a 40 percent surge in global uranium spot prices within a single month, directly inflating China's import costs.[52] **Academic consensus warns that this extreme reliance leaves Beijing structurally exposed to the high volatility of the international market**.[53]

This high exposure to external price volatility is compounded by domestic supply constraints. China's internal uranium reserves are both quantitatively limited and their geographical distribution is highly uneven, with Xinjiang, Inner Mongolia, and Jiangxi accounting for over 80 percent of the total. Moreover, in regions like Xinjiang, reserves are primarily deep-seated, leading to higher extraction costs.[54] In this context, China has several options: **finding new sources of uranium, diversifying, and stockpiling**.

Peng urges an **intensification of deep-exploration initiatives** within the resource-rich basins of Xinjiang and Inner Mongolia, emphasising that technological breakthroughs in deep-earth mining have become a matter of strategic urgency (*技术突破已刻不容缓*).[55] In parallel, Beijing is investing in marine extraction technologies.[56] In April 2025, researchers at Lanzhou University announced a major breakthrough, developing an advanced material capable of doubling the absorption rate of uranium from seawater, earning the technology the moniker of a "predator-like material."[57]

Concurrently, Beijing has attempted to diversify away from over-reliance on a single supplier, Kazakhstan in this case. **Namibia has emerged as a good solution and progressively a cornerstone of China's current overseas uranium strategy** through a series of state acquisitions: the Langer

[48] *Rachel Cheung, Ibid.*

[49] *For China's domestic production of uranium in 2024: "Uranium production by country -- World Nuclear Association," World Nuclear Association, January 20, 2026, https://world-nuclear.org/information-library/facts-and-figures/uranium-production-by-country.*

[50] *"World nuclear power reactors & uranium requirements," Ibid.*

[51] *Peng Wenhao, Ibid.*

[52] *Peng Wenhao, Ibid.*

[53] *Yang Yueping and Wang Ping, Ibid.*

[54] *Peng Wenhao, Ibid.*

[55] *Yang Yueping and Wang Ping, Ibid.*

[56] *Shi Huang, "Chinese scientists make seawater uranium extraction 40 times more efficient," South China Morning Post, April 1, 2025, https://www.scmp.com/news/china/science/article/3304771/chinese-scientists-find-way-make-seawater-uranium-extraction-40-times-more-efficient.*

[57] *Chao Kong, "Scientists in China create a predator-like material to hunt for uranium in the ocean," South China Morning Post, April 26, 2026, https://www.scmp.com/news/china/science/article/3351260/scientists-china-create-predator-material-hunt-uranium-ocean.*

[58] *"哈萨克斯坦铀出口创历史新高" [Kazakhstan's uranium exports hit a record high], Ministry of Commerce of the People's Republic of China, December 29, 2023, https://kz.mofcom.gov.cn/jmxw/art/2023/art_36bc66588000482cad4b0f17e49d6dbd.html.*

[59] *"Bannerman partners with CNNC for Namibian uranium project," World Nuclear News, February 13, 2026, https://www.world-nuclear-news.org/articles/bannerman-partners-with-cnnc-for-namibian-uranium-project.*

Heinrich mine, the Husab mine (China's largest single investment project on the African continent), and the Rössing mine.[58] Very recently, in February 2026, the Australian company Bannermann Energy announced a joint-venture agreement with a CNNC subsidiary, with the objective of opening a fourth uranium mine in Etango.[59] Beyond Namibia *per se*, China has built a global web of trade deals, exploration memorandums, and joint-ventures agreements over the past two decades to secure its uranium supplies, with or in Australia, Canada, Zimbabwe, Mongolia, Uzbekistan, Kyrgyzstan, or Russia.[60]

Compounding these challenges, China's nuclear energy sector has entered a "phase of large-scale expansion" (*规模化扩张期*). The country's total installed capacity is projected to nearly double from 60 gigawatts in 2025 to 110 gigawatts[61] by 2030—an expansion equivalent to "building another French nuclear power system" from scratch (*相当于再造一个"法国核电体系"*).[62] Subsequently, China's uranium demand is expected to grow by more than 8 percent each year throughout the next decade and a half! This expansion of the nuclear sector will exacerbate China's resource vulnerabilities, driving its uranium requirements to even higher levels. **Given the geological challenges currently faced by China when it comes to raw uranium ore, achieving resource self-sufficiency in the short term remains highly unlikely**—a challenge that is, nonetheless, also true for other countries like the United States, South Korea, Russia, or France.

[60] *Yang Yueping and Wang Ping, Ibid.; "Uranium in Mongolia," World Nuclear Association, Last updated on January 7, 2026, https://world-nuclear.org/information-library/country-profiles/countries-g-n/mongolia; Richard Weitz, "China's uranium quest – Part I: Domestic shortages fuel global ambition," Jamestown, December 8, 2011, https://jamestown.org/chinas-uranium-quest-part-i-domestic-shortages-fuel-global-ambition/; Joao Peixe, "Uzbekistan seeks joint uranium-producing project with China," Oilprice.com, August 23, 2011, https://oilprice.com/Latest-Energy-News/World-News/Uzbekistan-Seeks-Joint-Uranium-Producing-Project-With-China.html; "Uranium in Kyrgyzstan," World Nuclear Association, Last updated on November 19, 2025, https://world-nuclear.org/information-library/country-profiles/countries-g-n/kyrgyzstan; "Russia and China sign enrichment plant agreement," World Nuclear Association, May 27, 2008, https://world-nuclear-news.org/articles/russia-and-china-sign-enrichment-plant-agreement.*

[61] *"Nuclear power in China," World Nuclear Association, Last updated April 24, 2026, https://world-nuclear.org/information-library/country-profiles/countries-a-f/china-nuclear-power. "China—World nuclear outlook report," World Nuclear Association, January 19, 2026, https://world-nuclear.org/our-association/publications/world-nuclear-outlook-report/china---world-nuclear-outlook-report.*

[62] *Peng Wenhao, Ibid.*

China Trends is a quarterly publication by Institut Montaigne's Asia Program, which is composed of **Joseph Dellatte**, Head of Energy and Climate Studies; **Mathieu Duchâtel**, Director of International Studies; **François Godement**, Special Advisor and Resident Senior Fellow - Asia and United States; **Rosalie Klein**, Project Officer; **Claire Lemoine**, Project Manager and **Pierre Pinhas**, Policy Fellow & Editor of China Trends.