

# China's 'Polar Silk Road' And Its Strategic Impact on Arctic Energy Geopolitics

AMULYA JOMY

*Amity University, Uttar Pradesh*

*Abstract- Climate change is rapidly transforming the Arctic from a remote frozen area into a vital hub for global energy and shipping. It unlocks huge reserves, 13% of the world's undiscovered oil and 30% of natural gas. This study fills key research gaps by examining PSR's effects on non-Arctic energy buyers such as Japan, South Korea, and India, plus Arctic indigenous groups like the Inuit, Sàmi, and Yupik. It tackles three questions: How does PSR reshape energy politics and security? How do shared goals and clashes influence Arctic rules and partnerships? Drawing on realist views of power struggles and critical geopolitics on shaping stories, it reviews Arctic Council papers and compares China's Russia ties to Japan's team efforts, using secondary data. Findings highlight PSR's mixed impact: helpful joint work on safe shipping, but damage to native lands from drilling, spills, and deals skipping broad input. Overall, PSR strains groups like the Arctic Council, calling for stronger indigenous roles and smart teamwork to balance interests and ensure fair, lasting management.*

*Index Terms- Polar Silk Road, Arctic Energy Geopolitics, Indigenous Autonomies, Non-Arctic Importers, Multipolar Governance*

## I. INTRODUCTION

The Arctic, long envisioned as a frozen periphery of global affairs, has emerged as a pivotal arena of strategic contestation in the 21st century, driven by the inexorable advance of climate change and the attendant unlocking of vast energy reserves and navigational shortcuts. Together with the Northern Sea Route (NSR), the region's hydrocarbon wealth, estimated at 13% of undiscovered global oil and 30% of natural gas, promises to revolutionize international energy trade and maritime logistics as polar ice retreats at an unprecedented rate, potentially leaving the Arctic ice-free in summers by mid-century. This change is not just economic or environmental; it is also deeply geopolitical, allowing non-Arctic powers to enter an area that has historically been controlled by the eight Arctic littoral states. Leading this

incursion is the People's Republic of China (PRC), whose "Polar Silk Road" (PSR), an Arctic extension of its ambitious Belt and Road Initiative (BRI), aims to integrate Beijing's economic objectives into resource extraction, shipping corridors, and polar governance. Initiated in earnest since China's 2018 Arctic Policy white paper, the PSR embodies a multifaceted strategy of investment, diplomatic maneuvering, and normative positioning, culminating in landmark accords such as the October 2025 Russia-China agreement on NSR development, which formalizes collaborative infrastructure and energy projects amid escalating great-power rivalries. This study addresses these gaps by interrogating the strategic imprint of China's PSR on Arctic energy geopolitics from the perspective of non-Arctic energy importers, with a particular lens on the attendant political and security implications for indigenous polities. Its central objective is to dissect how the PSR reshapes polar energy landscapes, foregrounding the underexamined energy-focused dynamics that propel institutional realignments and alliance formations. Guiding this endeavor are three interlocking research questions:

1. How does China's Polar Silk Road reshape Arctic energy geopolitics for non-Arctic energy-importing states, and what are the resulting political and security implications for Arctic indigenous communities?
2. How do competing and converging interests between China and other non-Arctic consumers shape institutional and alliance dynamics around Arctic energy governance?

This research incorporates a combination of research methodologies that correspond to the most significant theories for study. Discourse analysis looks closely at official statements from the Arctic Council and agreements between countries to see how China and similar nations describe their interests in the region. The information comes from secondary sources, such

as the publicly accessible materials, including online reports and analyses from think tanks. As China's PSR carves pathways through the melting ice, it not only accelerates the Arctic's integration into global energy circuits but also imperils the delicate equilibrium of indigenous autonomies and non-Arctic equities.

## II. HISTORIC TRAJECTORY: FROM FROZEN PERIPHERY TO STRATEGIC FRONTIER

The Arctic's transformation from a remote, ice-bound afterthought to a bustling hub of global ambition didn't happen overnight, it's the story of melting ice meeting melting barriers, where climate change cracked open doors that geopolitics then kicked wide. For China, this shift traces a deliberate path from cautious scientific toe-dipping to bold economic and diplomatic strides, all under the umbrella of its "Polar Silk Road" (PSR).

The real pivot came in 2013, a banner year that synced China's global outreach with Arctic opportunity. That's when President Xi Jinping unveiled the BRI, a trillion-dollar vision of silk roads reborn for the 21st century, linking Asia to Europe and beyond through infrastructure and trade. Coincidentally, or perhaps not, China secured observer status in the Arctic Council, the region's premier governance forum, granting it a seat at the table without a vote. This was no accident; it marked Beijing's first formal toehold, allowing input on environmental policies and resource talks while Arctic states grappled with the implications of non-littoral players crashing the party. Suddenly, the frozen periphery felt a lot less peripheral to a nation hungry for secure energy imports.

## III. COMPETING AND CONVERGING INTERESTS: CHINA AND OTHER NON-ARCTIC CONSUMERS IN ARCTIC ENERGY GOVERNANCE

Areas of Convergence: Shared Priorities Foster Practical Cooperation

Non-Arctic Asian importers confront similar vulnerabilities: heavy reliance on imported hydrocarbons, exposure to geopolitical risks in

southern sea lanes, and the promise of the Northern Sea Route (NSR) as a shorter alternative to Europe. The NSR can reduce transit times by up to 40 percent, lowering fuel costs and enhancing supply resilience. The Arctic's estimated reserves, 13 percent of undiscovered global oil and 30 percent of natural gas, offer diversification away from Middle Eastern sources.

These overlapping interests have encouraged collaboration. Since 2015, China, Japan, and South Korea have maintained trilateral high-level dialogues on Arctic affairs, focusing on scientific research, sustainable shipping, and environmental protection. All three hold observer status in the Arctic Council since 2013, enabling joint participation in working groups on marine pollution and shipping guidelines. Such forums allow coordinated input on rules that support safer NSR operations, benefiting collective commercial goals. These convergences reinforce calls for rules-based governance, where non-Arctic voices contribute to standards on energy extraction and transit, promoting stability for all importers.

Areas of Competition: China's Scale and Bilateral Approach Generate Caution

China's advantages in scale set it apart. With investments exceeding \$90 billion in Arctic projects since 2013 including major stakes in Yamal LNG and the October 2025 Russia-China NSR agreement Beijing secures preferential access to liquefied natural gas (LNG) and infrastructure. Its "near-Arctic state" framing and PSR branding position it as a lead actor, often through bilateral arrangements with Russia that sidestep broader multilateral scrutiny.

This creates perceptions of "energy leverage," where China's dominance risks excluding or subordinating others. Japan and South Korea, as U.S. allies, respond with restraint. Japan has paused new Arctic investments following the 2022 Ukraine conflict due to sanctions risks, favoring group diplomacy in the Arctic Council to emphasize environmental safeguards and consensus rules. South Korea advances NSR studies cautiously, prioritizing alignment with Western partners on norms and security.

Competition thus drives institutional evolution. The Arctic Council, despite disruptions from geopolitical tensions, has seen heightened non-Arctic involvement in energy-related discussions.

The Polar Silk Road (PSR), China's Arctic extension of the Belt and Road Initiative, integrates the region into global energy and trade networks via investments in resource extraction, infrastructure, and the Northern Sea Route (NSR). While offering economic opportunities for non-Arctic states and multipolar cooperation, it poses significant challenges to Arctic Indigenous communities. (Inuit, Sámi, Yupik, and others) whose livelihoods and cultures depend on intact ecosystems and traditional practices.

#### IV. IMPLICATIONS OF THE POLAR SILK ROAD FOR ARCTIC INDIGENOUS COMMUNITIES

##### Environmental and Livelihood Impacts

Chinese stakes in Russian Arctic projects, approximately 30% in Yamal LNG and 20% in Arctic LNG 2, drive large-scale hydrocarbon extraction and increased NSR shipping. These activities heighten risks of pollution, habitat disruption, black carbon emissions, and accelerated ice melt, threatening subsistence hunting, fishing, and reindeer herding, as well as food security and cultural continuity for Indigenous groups.

China's 2018 Arctic Policy white paper pledges respect for Indigenous traditions and cultures while promoting sustainable development. However, bilateral Russia-China agreements, including the October 2025 NSR cooperation pact, prioritize energy and infrastructure goals, often with limited consultation of the Arctic Council's Permanent Participants (Indigenous organizations with consultation rights but no voting power).

##### Erosion of Self-Governance

From a critical geopolitics lens, PSR-related securitization frames the Arctic as a strategic frontier, marginalizing Indigenous rights under frameworks like the UN Declaration on the Rights of Indigenous Peoples (UNDRIP). In Russia, federal-backed

projects limit Indigenous veto power, leading to land encroachments, displacement risks, and weakened self-determination. Bilateral deals frequently bypass multilateral oversight, straining the Arctic Council's mechanisms and reducing Indigenous influence over development decisions.

##### Broader Political and Security Implications

In a multipolar context of heightened China-Russia alignment, the PSR shifts focus toward strategic competition and resource access. Non-Arctic actors gain from diversified energy and shipping routes, yet Indigenous communities disproportionately bear localized costs: ecological degradation, cultural disruption, and vulnerabilities from external economic leverage.

The PSR accelerates Arctic integration but risks undermining Indigenous autonomies by prioritizing securitized economic development over inclusive governance. Strengthening the role of Permanent Participants, ensuring meaningful consultation, and promoting equitable benefit-sharing are essential to balance sustainable development with the protection of self-governance and cultural integrity in a rapidly changing Arctic.

#### CONCLUSION

In synthesizing the strategic ramifications of China's Polar Silk Road (PSR) on Arctic energy geopolitics, this analysis reveals a transformative yet precarious reconfiguration of polar dynamics, where economic integration collides with indigenous autonomies and multipolar rivalries. The PSR, through investments exceeding \$90 billion and bilateral accords like the 2025 Russia-China Northern Sea Route agreement, amplifies China's energy leverage while exposing non-Arctic importers, such as Japan, South Korea, and India, to vulnerabilities amid converging interests in diversified hydrocarbon flows.

Revitalizing the Arctic Council with enhanced indigenous veto mechanisms, aligned with UNDRIP's free, prior, and informed consent, offers the most viable path to equilibrate power asymmetries, fostering selective alliances that prioritize equity over dominance. Policymakers must thus recalibrate toward hybrid governance, integrating non-Arctic

voices while safeguarding the north's fragile equilibria, lest thawing frontiers ossify into entrenched hegemonies that imperil global stability. This imperative demands not mere adaptation, but a normative pivot toward resilient stewardship in an era of inexorable flux.

Road," "near-Arctic state" framing, respect for indigenous peoples, and sustainable development principles).

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