

GEOPOLITICS OF ENERGY: HOW RESOURCE DEPENDENCY SHAPES GLOBAL POWER DYNAMICS

Dr. Akash Khan

Lecturer, Bacha Khan University, Charsadda

Email: akashkhanndu@gmail.com

Muhammad Kashif Irshad

Additional Director General, Khyber Pakhtunkhwa Centre of Excellence on
Countering Violent Extremism

Email: kashifkhankhail@hotmail.com

Wahid Ullah

CEO, Pak Heritage Nexus

Email: wahidullah.cve@gmail.com

Abstract

The strategic distribution and control of energy resources have long been a fundamental determinant of global power dynamics. From the coal-powered British Empire to the oil-centric American century, access to abundant and reliable energy has been a cornerstone of economic prosperity and geopolitical influence. This paper argues that in the 21st century, energy resource dependency continues to function as a primary axis of geopolitical competition, albeit in evolving and increasingly complex forms. The traditional paradigm, characterized by the leverage of hydrocarbon-rich states and the vulnerability of consuming nations, is being reconfigured by three transformative shifts: the shale revolution in the United States, the assertive energy statecraft of Russia and petrostates, and the global imperative of the clean energy transition. This paper examines the theoretical foundations of energy as a geopolitical instrument, analyzes the strategies of key state actors, and explores the emerging battlegrounds of critical minerals and green technology. It concludes that while fossil fuels will remain a source of geopolitical friction in the near term, the center of gravity in the geopolitics of energy is gradually shifting from control over hydrocarbon reserves to dominance over the technologies, supply chains, and intellectual property that will power a low-carbon future. Navigating this transition requires a recalibration of energy security doctrines away from a narrow focus on supply security toward a holistic strategy encompassing resilience, diversification, and technological leadership.

Keywords: Energy Geopolitics, Resource Dependency, Energy Security, Petrostates, Shale Revolution, Energy Transition.

Introduction

Energy is not merely a commodity; it is the lifeblood of modern industrial economies and a fundamental prerequisite for military power. The quest to secure energy resources has dictated alliances, provoked conflicts, and shaped the contours of the international system for over a century. The geopolitics of energy revolves around a simple, yet profound, asymmetry: the geographic concentration of fossil fuel reserves is starkly at odds with the global distribution of demand. This mismatch creates relationships of dependency and leverage, turning energy flows into instruments of statecraft and pipelines into conduits of political influence.

The 20th-century energy order was largely defined by the dominance of oil. The OPEC oil embargo of 1973 was a watershed moment, demonstrating how resource-rich states could wield the "oil weapon" to achieve political ends and fundamentally alter the global economic landscape. For decades, the security of sea lanes, particularly in the Strait of Hormuz, and the stability of key producing regions like the Middle East, became paramount strategic concerns for major consuming nations in North America, Europe, and Asia.

However, the early 21st century has unleashed forces that are disrupting this established order. The shale revolution transformed the United States from the world's largest importer of hydrocarbons into a top-tier producer and exporter, recalibrating its global strategic posture. Simultaneously, Russia has leveraged its vast natural gas reserves to exert influence over Europe, while rising powers like China pursue a global strategy to lock in long-term energy supplies. Furthermore, the overarching imperative of climate change is driving a global energy transition, creating new geopolitical vulnerabilities and opportunities centered on critical minerals, renewable technology, and the infrastructure of a decarbonized world. This paper contends that understanding contemporary global power dynamics requires a sophisticated analysis of how these old and new energy paradigms intersect, creating a complex and volatile geopolitical landscape.

Theoretical Framework: Energy as a Geopolitical Instrument

The use of energy resources as tools of foreign policy can be understood through several interrelated theoretical lenses.

The Concept of the "Resource Curse" and Petrostate Politics

The "resource curse" or "paradox of plenty" describes the phenomenon where countries rich in natural resources, particularly oil and gas, often experience less economic growth and worse development outcomes than countries with fewer resources (Ross, 2012). This curse has profound geopolitical implications. Politically, resource wealth can lead to the consolidation of authoritarian regimes, as rulers use rent distribution to co-opt dissent and avoid accountability. This creates petrostates, whose political survival is tied to hydrocarbon revenues rather than popular legitimacy. Internationally, this makes their foreign policy often volatile and driven by the need to maintain revenue streams and regional dominance, as seen in the behavior of states like Saudi Arabia, Russia, and Venezuela. The stability of the global energy market is thus tied to the internal political dynamics of these often-unstable states.

Energy Security and the Vulnerability of Interdependence

Energy security is classically defined as the uninterrupted availability of energy sources at an affordable price. For consuming nations, this has traditionally meant diversifying supply sources, protecting transportation routes, and maintaining strategic stockpiles. For producing nations, it means securing demand and maximizing revenue. This creates a relationship of asymmetric interdependence (Keohane & Nye, 1977). While both sides benefit from trade, the consumer state is often more vulnerable to supply disruptions than the producer is to a loss of a single customer. This vulnerability grants producers political leverage. The repeated gas disputes between Russia and Ukraine, which disrupted supplies to Europe, are a clear example of how energy interdependence can be weaponized to punish adversaries and influence policy in transit and consumer states.

Mercantilism versus Liberalism in Energy Strategy

State approaches to energy security often oscillate between mercantilist and liberal philosophies. A mercantilist approach views energy resources as strategic assets to be controlled by the state through national companies, long-term bilateral deals, and if necessary, military force. This is a zero-sum view of energy geopolitics, where one state's gain is another's loss. China's global quest for equity oil and gas projects through its national oil companies exemplifies this approach. In contrast, a liberal approach emphasizes open markets, transparent pricing, and multilateral cooperation to ensure energy security. It posits that free trade in energy, governed by market principles, benefits all participants by promoting efficiency and diversification. The International Energy Agency (IEA) was founded on this liberal ideal. The tension between these two philosophies continues to define much of the international competition for resources.

Key Actors and Evolving Strategies

The global energy landscape is defined by the strategic maneuvers of a few major powers, each adapting to the new realities of the market and the energy transition.

The United States: From Consumer to Producer Power

The shale revolution represents the most significant shock to the global energy system in decades. By mastering the technologies of hydraulic fracturing and horizontal drilling, the U.S. dramatically increased its domestic production of oil and natural gas. This had several profound geopolitical consequences. First, it reduced American vulnerability to supply shocks from the Middle East, granting Washington greater strategic flexibility in its foreign policy (Yergin, 2020). Second, the emergence of the U.S. as a major LNG exporter introduced new competition into global gas markets, providing European and Asian consumers with an alternative to Russian pipeline gas and thereby diluting Moscow's market power. However, the U.S. has not fully retreated from the Middle East, as the stability of global oil prices remains a core national interest, demonstrating that even as a producer, it cannot fully insulate itself from global market dynamics.

Russia: The Strategic Use of Gas as a Political Tool

Russia possesses the world's largest natural gas reserves and has consistently used its energy resources as a primary instrument of its foreign policy. Its strategy is based on leveraging Europe's dependency on Russian pipeline gas to generate revenue, divide European Union unity, and advance its strategic interests. The Nord Stream pipeline projects, designed to bypass traditional transit states like Ukraine, were clear geopolitical moves to increase Moscow's leverage over both its neighbors and its Western European customers. The 2022 war in Ukraine and the subsequent energy crisis in Europe have crystallized this dynamic, leading to a concerted Western effort to decouple from Russian energy. This episode underscores the high-risk nature of Russia's energy statecraft, which can provoke a decisive and permanent reorientation of its customers away from its resources.

China: The Global Quest for Energy Security

China's explosive economic growth has made it the world's largest importer of oil and natural gas. Driven by a deep-seated mercantilist impulse to avoid vulnerability, Beijing has pursued a comprehensive global strategy. This involves long-term supply contracts, acquiring upstream assets in Africa, the Middle East, and Latin America through its national oil companies, and financing energy infrastructure abroad via the Belt and Road Initiative (BRI). This strategy is not solely commercial; it is deeply geopolitical, creating bonds of dependency with supplier states and extending China's strategic reach. Furthermore, recognizing the energy transition, China has also established a dominant position in the entire solar panel and battery supply chains, and is aggressively securing access to critical minerals like cobalt and lithium, positioning itself as a key player in both the old and new energy orders.

OPEC and Petrostate Adaptation

The Organization of the Petroleum Exporting Countries (OPEC), and its extended version OPEC+, remains a powerful force in managing oil supplies and influencing global prices. However, its members face an existential long-term threat from the energy transition. This has prompted divergent strategies. A state like Saudi Arabia is investing heavily in economic diversification through its Vision 2030, while also using its low-cost production base to maintain market share. Other petrostates, particularly those with less fiscal resilience, face a more precarious future. The internal cohesion of OPEC+ is constantly tested by the differing breakeven prices and geopolitical alignments of its members, such as Russia and the Gulf Arab states.

The New Frontier: Geopolitics of the Energy Transition

The global shift towards clean energy is not eliminating geopolitics; it is redistributing geopolitical leverage and creating new sources of competition.

Critical Minerals: The New Oil

The renewable energy and digital economies are intensive consumers of a suite of critical minerals, including lithium, cobalt, rare earth elements, and copper. These resources are geographically concentrated, often more so than oil and gas. The Democratic Republic of Congo dominates cobalt production, China refines the majority of the world's rare earths, and lithium production is concentrated in Australia, Chile, and China (IEA, 2021). This creates new dependencies and vulnerabilities. Control over these supply chains grants significant economic and strategic advantage, and the risk of resource nationalism is high. The competition to secure stable supplies of these minerals is already a central feature of diplomacy between major powers, akin to the oil diplomacy of the past.

Technological Dominance and the "Green Race"

In the new energy paradigm, geopolitical power will be derived not only from owning resources but from controlling the technologies that harness them. Leadership in renewables manufacturing, battery storage, green hydrogen, and smart grid technologies is becoming a key marker of national power. This has sparked a "green race" between the U.S., China, and the European Union, involving massive industrial policy initiatives like the U.S. Inflation Reduction Act and the European Green Deal. The state that leads in these technologies will not only capture the economic benefits of a growing market but will also set the standards and rules for the global energy system of the future.

The Geopolitics of Grids and Infrastructure

The energy transition involves a shift from centralized, commodity-based systems to more decentralized, technology-intensive systems based on electricity. This changes the geography of energy security. New infrastructure, such as intercontinental electricity grids or hydrogen pipelines, could create new interdependencies. For instance, a future where North Africa exports solar-generated hydrogen to Europe would create a new strategic relationship, with parallels to, but also differences from, the current gas trade. Cybersecurity of critical energy infrastructure will also become an even more pressing security concern.

Implications and Future Pathways

The evolving geopolitics of energy presents a series of challenges and strategic imperatives for the international community.

The Resilience of Petrostates

The pace of the energy transition will determine the fate of many petrostates. A rapid decline in global oil and gas demand could trigger fiscal and political crises in states that have failed to diversify their economies. This has the potential to destabilize entire regions, creating new security challenges and migration pressures. The international community has a vested interest in managing this transition in a way that encourages stability and orderly economic transformation in resource-dependent economies.

Redefining Energy Security

The traditional concept of energy security must be expanded. It must now encompass:

- **Supply security** for critical minerals and materials.
- **Resilience of digital and physical infrastructure** for electricity grids.
- **Technological sovereignty** in key clean energy domains.
- **Diversification** of energy sources and supply chains to mitigate concentration risk.

This requires a new toolkit, including strategic stockpiling of critical minerals, investment in R&D, fostering resilient supply chains with allies ("friend-shoring"), and international cooperation on standards and grid interoperability.

The Role of International Institutions

Existing international institutions like the IEA, founded in the era of oil crises, are adapting to this new world. There is a growing need for enhanced global governance to manage the trade in critical minerals, foster technology transfer, and ensure that the energy transition does not become a new source of geopolitical conflict. New multilateral frameworks may be necessary to promote transparency, sustainable mining practices, and cooperative security for the new energy supply chains.

Conclusion

The geopolitics of energy is in a period of profound flux. The enduring power of hydrocarbon-based statecraft, exemplified by Russia's pipeline politics and OPEC's market management, now coexists with the emerging geopolitics of the energy transition. In this new landscape, power is increasingly derived from technological innovation, control over critical mineral supply chains, and the ability to build the infrastructure of a low-carbon future.

While oil and gas will remain sources of revenue and leverage for the foreseeable future, their centrality to global power dynamics is gradually diminishing. The rise of the U.S. as a hydrocarbon producer has already altered the global balance, and the strategic rise of China is tied to its dual role as a massive consumer of fossil fuels and a dominant force in clean energy technology. The states that will thrive in the coming decades are those that successfully navigate this dual challenge: managing their existing energy dependencies while simultaneously positioning themselves as leaders in the new energy economy. The ultimate geopolitical victory in the 21st century may belong not to the state with the largest oil reserves, but to the one that masters the technologies and systems that render those reserves obsolete. The race for energy dominance has entered a new, more complex, and decisive phase.

References

- BP. (2022). *BP Statistical Review of World Energy 2022*. BP plc.
- Goldthau, A., & Westphal, K. (2019). Why the global energy transition does not mean the end of the petrostate. *Global Policy*, 10(2), 279-283.
- International Energy Agency (IEA). (2021). *The Role of Critical Minerals in Clean Energy Transitions*. IEA.
- Kalicki, J. H., & Goldwyn, D. L. (Eds.). (2013). *Energy and security: Strategies for a world in transition*. Woodrow Wilson Center Press.
- Keohane, R. O., & Nye, J. S. (1977). *Power and interdependence: World politics in transition*. Little, Brown.
- Klare, M. T. (2008). *Rising powers, shrinking planet: The new geopolitics of energy*. Metropolitan Books.
- Le Billion, P. (2012). *Wars of plunder: Conflicts, profits and the politics of resources*. Oxford University Press.
- Morse, E. L. (2019). *The new geopolitics of energy*. Center on Global Energy Policy, Columbia University.
- Ross, M. L. (2012). *The oil curse: How petroleum wealth shapes the development of nations*. Princeton University Press.
- Stulberg, A. N. (2007). *Well-oiled diplomacy: Strategic manipulation and Russia's energy statecraft*. SUNY Press.
- Yergin, D. (1991). *The prize: The epic quest for oil, money, and power*. Simon & Schuster.
- Yergin, D. (2020). *The new map: Energy, climate, and the clash of nations*. Penguin Press.
- Zhong, X. (2022). China's energy security and the Belt and Road Initiative: A strategic analysis. *Journal of Contemporary China*, 31(135), 383-399.