



Energy Security and Geopolitical Strategies: India's Role in Shaping South Asia's Future

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ABSTRACT :

The changing energy security environment in South Asia is examined in this study, with an emphasis on India's role in shaping regional stability and development. As South Asia experiences rapid economic growth, energy demands have surged, challenging regional security and sustainability. India, the largest economy in the region, faces complex energy challenges due to heavy reliance on imports, rising domestic demand, and geopolitical tensions. India's energy security is at the core of its national interests. India is one of the world's largest consumers of energy. The country's domestic energy resources, particularly in fossil fuels like coal, have limitations, creating a reliance on imports for oil, natural gas, and uranium. As a result, India has been keen to diversify its energy sources, reduce dependence on a few external suppliers, and secure stable energy supply routes. This paper examines India's strategies to secure energy resources, reduce dependency, and foster cooperation with neighboring countries. By analyzing India's cross-border energy projects and renewable initiatives, the paper highlights how India's energy security strategies influence regional geopolitics, economic integration, and stability.

Key Words: Energy Security, South Asia, Regional Integration, Geopolitics.

Introduction :

To navigate the global energy landscape and advance sustainable, safe, and equitable access to energy, it is imperative to address the intricate and multifaceted issues of energy security and geopolitics of energy. War, political unrest, and terrorism are examples of geopolitics of energy that can affect energy security by interfering with infrastructure and energy supplies. Geopolitics of energy may also have an impact on investments in energy production and infrastructure. In this sense, supply disruptions may result from instability or conflict in areas with abundant resources. Since the industrial revolution, the geopolitics of energy—including who supplies it and how to guarantee reliable access to those supplies—has played a significant role in determining both global wealth and security. Over the next few decades, energy politics will determine the fate of the planet. The political aspect of energy, linked to the sources of supply and demand, is brought to the public's attention during crises, particularly when volatile oil markets drive up prices and politicians hear constituent protests. But energy politics have become even more complex.

South Asia's growth trajectory is marked by rising energy demands driven by population growth, industrial expansion, and urbanization. However, this growth comes with the challenge of energy scarcity, a pressing issue that threatens economic stability and security across the region. For India, energy security—the ability to maintain stable energy supplies to support development—is both a national and regional priority. Due to high dependency on energy imports, particularly for oil and natural gas, India's energy policy is interwoven with its foreign policy and defense strategies.

India is uniquely positioned to spearhead South Asian energy security initiatives due to its status as a regional power. By fostering cooperative energy projects and adopting strategies to secure its energy supply, India not only addresses its own needs but also contributes to regional stability. This paper investigates India's energy security challenges, its geopolitical approach within South Asia, and the broader implications of its energy policies on regional security.

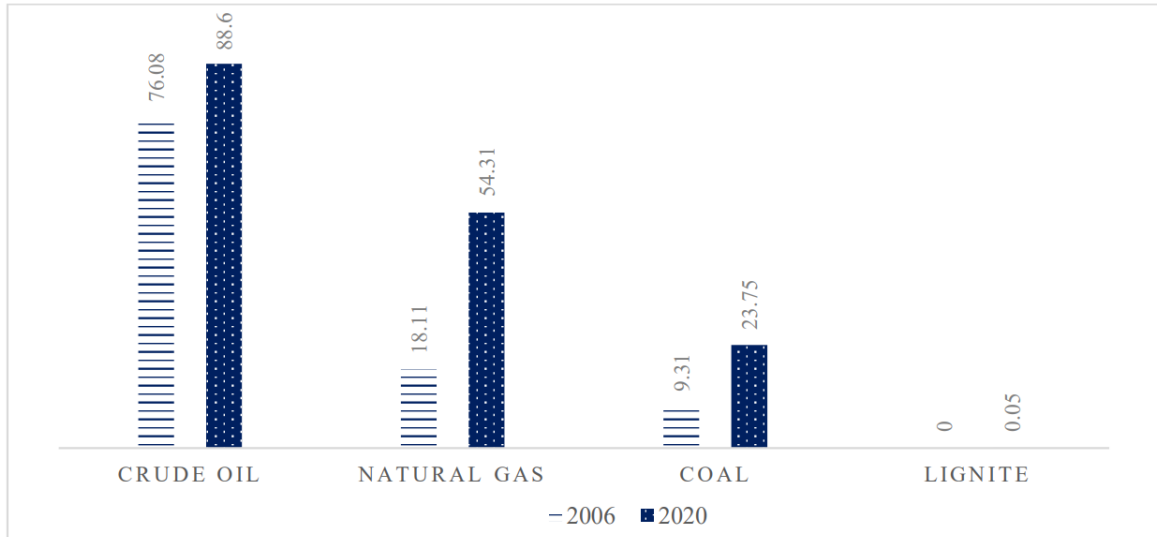
India's Energy Security Challenges

India's energy security is influenced by both internal and external influences. India, the world's third-largest consumer of energy, depends on imports for more than 80% of its oil needs and over 45% of its natural gas demands (Ministry of Petroleum and Natural Gas, 2023). Due to this reliance, India is vulnerable to changes in the price of oil globally and geopolitical unrest, especially in the Middle East, where a significant amount of its energy is imported.

1. Dependency on Fossil Fuels and Imports

Despite significant investments in renewable energy, fossil fuels remain the cornerstone of India's energy sector. Coal powers around 70% of India's electricity generation, and oil fuels the transportation sector. This reliance on imported fossil fuels not only raises India's exposure to price volatility but also adds a layer of vulnerability as geopolitical conflicts can disrupt supplies. Consequently, India is pursuing strategies to diversify its energy mix, including the development of renewable resources like solar and wind power. Energy import dependency for crude oil, natural gas, coal and lignite are 88.6%, 54.31%, 23.75% and 0.05% respectively in 2020.

Figure 1: Comparison of energy import dependency of different energy resources between 2006 and 2020.



Source: Government of India (2010) and Government of India (2021)

2. Rising Domestic Demand

India's rapid economic and industrial growth drives an increasing demand for energy. According to the Ministry of Power's 2023 report, energy demand in India is expected to grow at an annual rate of 6% over the next decade. This rising demand creates pressure to ensure stable, affordable, and environmentally sustainable energy sources. India is poised to face a higher increase in energy demand than any other country over the next decade mainly because of its size and the scale of rising demand from all sectors, the International Energy Agency (IEA) said in its World Energy Outlook India was the fastest growing major economy in 2023-24, with output increasing by 7.8%.

India has launched initiatives like the Pradhan Mantri Ujjwala Yojana (PMUY) and the UJALA Scheme to increase energy access and efficiency, reflecting the government's efforts to address domestic energy needs while supporting environmental goals.

India's Geopolitical Strategies in South Asia

As energy security is closely linked to geopolitical stability, India's energy strategies in South Asia have significant geopolitical implications. Recognizing the interconnected nature of regional stability, India has sought to establish strong energy partnerships with neighboring countries, promoting mutual benefits in energy access, infrastructure, and economic growth.

1. Cross-Border Electricity Trade and Hydropower Collaboration

One of India's most effective strategies for promoting energy security is cross-border electricity trade. Through partnerships with countries like Bhutan and Nepal, India imports hydroelectric power, which not only meets domestic energy demands but also supports economic development in these countries. For instance, India imports approximately 1,400 MW of hydroelectricity from Bhutan annually, making Bhutan a major energy partner.

India also exports electricity to Nepal and Bangladesh, creating an interdependent network of energy trade that enhances stability. The energy cooperation agreements allow for surplus energy sharing, which has significant positive impacts on regional relations. Such partnerships illustrate how energy security fosters trust and reduces tensions between neighboring countries.

2. Expanding Renewable Energy Initiatives in South Asia

India's focus on renewable energy has not only domestic benefits but also supports South Asia's collective energy resilience. India co-founded the International Solar Alliance (ISA), an organization that encourages member countries to adopt solar energy technologies. Through ISA, India provides technical and financial support to South Asian countries, promoting the transition to renewable energy and reducing dependency on imports.

India's domestic renewable initiatives are equally significant. As of October 2024, India's installed renewable energy capacity is 203.18 GW, which is a 13.5% increase from the previous year. This includes 92.19 GW of solar power, 47.71 GW of wind power, 10.72 GW of biomass and co-generation, 5.07 GW of small hydro power, 0.60 GW of waste to energy, and 46.96 GW of large hydro.

Non-fossil fuel capacity: When including nuclear energy, India's total non-fossil fuel capacity is 211.36 GW in 2024. This is about 45.5% of the country's total capacity. This shift towards renewable not only strengthens India's energy independence but also positions it as an environmental leader in South Asia, advocating for clean energy policies that benefit the region as a whole.

India-South Asia Energy Cooperation: Case Studies

To further explore India's role in South Asian energy security, we examine specific case studies of cross-border cooperation:

1. India-Bhutan Hydropower Partnership

The India-Bhutan hydropower partnership is often cited as a successful model of energy cooperation. Bhutan generates a surplus of hydroelectric power, which it exports to India under a long-standing agreement. This trade supports Bhutan's economy while helping India meet its energy demands sustainably. By purchasing surplus power from Bhutan, India enhances regional cooperation and builds economic interdependence.

Hydropower projects, which provide Bhutan with export income while promoting economic integration, are a prime example of India and Bhutan working together in a win-win manner. Hydropower has been the mainstay of Bhutan's economy since the 336 MW Chukha hydropower plant was put into service in 1988, accounting for more than 35% of the country's total income. India constructed the 60 MW Kurichhu plant and the 1,020 MW Tala project between 1998 and 2007. The goal capacity for collaboratively designed hydropower plants was established at 10,000 MW by 2020. Four cooperative ventures—600 MW Kholongchu, 180 MW Bunakha, 570 MW Wangchhu, and 770 MW Chamkharchhu-I—were included in an Inter-Governmental Agreement in 2014. Chukha, Tala, Kurichhu, and the 720 MW Mangdechhu project—which was awarded the 2020 Brunel Medal—are the four hydroelectric projects that India has built in Bhutan.

These ongoing projects include the 600 MW Kholongchhu, for which Prime Minister Narendra Modi placed the foundation stone in 2014, the 1,200 MW Punatsangchhu-I, and the 1,020 MW Punatsangchhu-1. In Bhutan, India has installed more than 2,000 MW of hydropower, which accounts for 27% of government revenue and 14% of Bhutan's GDP. Bhutan has diversified its economy, although India continues to be its biggest consumer of hydropower, accounting for 80% of the country's external public debt.

2. India-Nepal Energy Projects

India's collaboration with Nepal on energy projects such as the Arun III Hydroelectric Plant exemplifies a strategic partnership aimed at meeting mutual energy needs. India is already working on several of Nepal's projects, such as the Mahakali Treaty (6,480 MW). The 900 MW Upper Karnali Project. With India's support, Nepal has been able to expand its energy infrastructure and increase power generation, ultimately benefiting both countries. The energy trade agreement between India and Nepal not only bolsters Nepal's economy but also strengthens political and cultural ties.

A tripartite agreement was recently reached by Bangladesh, India, and Nepal to improve cross-border electricity trade. With India acting as the transmission facilitator, Nepal would export its excess hydroelectric power to Bangladesh annually between June 15 and November 15. At a rate of 6.4 cents per unit, Nepal would export 40 MW of power to Bangladesh across Indian territory in the first phase. The goal of this partnership is to address Bangladesh's increasing demand for electricity while promoting regional energy integration.

3. India-Bangladesh Electricity Exchange

India and Bangladesh have developed a strong energy partnership centered on electricity trade. India exports around 1,160 MW of electricity to Bangladesh, helping address Bangladesh's growing energy demands. This trade arrangement benefits both nations by enhancing Bangladesh's energy security and expanding India's influence in the region.

Implications for Regional Stability

For almost 150 years, national security planners have been concerned with what is now known as energy security. As the importance of energy in daily life has increased, so too has the lens through which this subject is seen. From India's point of view, energy trade aims to contribute to the sustainable development of South Asia. South Asian nations must realize that in order to achieve their energy needs, they must unite around a shared agenda.

India's approach to energy security and cooperation in South Asia's effects on regional stability are more extensive. By investing in cross-border infrastructure and supporting energy projects, India not only addresses its own needs but also promotes economic growth and stability among its neighbors.

1. Economic Growth and Regional Development

Energy access is a key factor for economic development. By enhancing energy availability for its neighbors, India promotes regional economic growth, reducing poverty and fostering stability. The South Asia Regional Initiative for Energy Integration (SARI/EI), for instance, has been instrumental in promoting integrated energy policies across the region, aligning with India's long-term goal of fostering peace and stability.

2. Reducing Political Tensions through Interdependence

India's energy partnerships create a framework of interdependence, reducing the likelihood of conflicts. By establishing mutually beneficial relationships, India strengthens diplomatic ties with its neighbors, mitigating political tensions. This interdependence supports regional peace and helps address security concerns arising from cross-border conflicts. Humanitarian aspects and regional dynamics must also be considered. Building relationships between individuals and using soft power can help close trust gaps and establish a setting where the two countries work together more. India could highlight how much better their aid is than that of other nations, like China, and match it with Bangladesh's developmental requirements. Promoting development and investment in South Asian countries' economies flourish and prosper.

Conclusion :

India's position as a regional power in South Asia has long been defined by its economic, strategic, and geopolitical aspirations. As the world's largest democracy and one of the fastest-growing economies, India's role in shaping the future of South Asia hinges significantly on its approach to energy

security and the broader geopolitical dynamics of the region. In the 21st century, where energy is intricately linked to national security, India's energy security strategies and geopolitical maneuvers will determine its trajectory and influence on regional stability, economic growth, and cooperation. India's energy security lies at the heart of its national interests, and this reality highlights the critical need for cooperation among South Asian countries to address energy demands at affordable prices. By fostering collaboration, the region can effectively meet its energy needs while promoting shared resources and infrastructure, ensuring that energy security becomes a collective priority that strengthens regional stability. To achieve this, India must evolve its foreign policy to prioritize inclusivity and trust, reassuring its neighboring countries that India is committed to supporting their national interests and fostering mutual growth. In a constantly shifting geopolitical landscape, India's ability to adapt its policies will be crucial in maintaining strong regional partnerships, with energy security serving as a stabilizing force for the entire South Asian region. This proactive approach will not only bolster India's energy security but also contribute to the broader vision of a more integrated and harmonious South Asia. India's efforts in ensuring energy security have a far-reaching impact on South Asia's future. By prioritizing renewable energy, establishing cross-border energy projects, and fostering cooperation, India not only secures its own energy needs but also enhances regional stability. India's energy policy, thus, serves as both a national priority and a regional strategy, advancing the prospects for a secure, sustainable, and prosperous South Asia. India as a central player in the global energy and geopolitical order. The successful execution of these strategies will ultimately determine the region's stability, security, and economic potential in the years to come.

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