

## Shades of India-China Energy Geopolitics: From Petroleum to Renewables<sup>1</sup>

**Dr. Nandakumar Janardhanan**

Assistant Professor, School of International Studies, Jawaharlal Nehru University

[nanduj123@gmail.com](mailto:nanduj123@gmail.com)

The demand for energy among the developing economies of Asia Pacific region has been witnessing a remarkable growth. According to the International Energy Agency, by 2030 India will account for the largest growth in oil demand in the world and by 2040 about 70% of total crude oil trade in the world will be directed towards the Asian consumers. Considering the fact that a significant share of the domestic energy mix of developing countries will be petroleum, the politics associated with securing the same is likely to get intense.

After China became a net oil importing country in 1993, the global energy market witnessed an increasing presence of Chinese International Oil Companies (IOC). With the unrelenting financial support of the State, these IOCs were able to secure petroleum exploration and production assets, long term purchase agreements and transportation contracts in producing countries. The increasing competition among oil import dependent countries also surged with the entry of China as a net importer in the market. The sheer scale of demand for petroleum by China evinced not only its long term economic ambitions, but also demonstrated a well-crafted strategy to

outmanoeuvre other importing countries in the global energy search. From South China Sea to

Africa and Latin America, countries witnessed China playing a determining role in securing ownership of resources and monopoly in international trade.

As the epicentre of energy consumption has been shifting from the Global West to Asia Pacific region, the energy geopolitics of India and China has been gaining greater attention. Being the two major consumers and importers of petroleum sources, these two have been competing with each other for securing oil and gas assets across the world. The last decade witnessed several instances where IOCs of both countries competed to secure stakes in petroleum exploration and production facilities in Central Asia, Africa and Latin America. In many instances, Indian companies lost out to China's aggressive market strategies. This not only exposed India's weaker energy links with the oil producing countries but also highlighted the political preparedness China has in pursuing its energy interests.

While the conventional fossil fuels continue to have a major role in the energy sector of India and China, alternative and renewable energy

<sup>1</sup> This article has excerpts from author's ongoing research on the Geopolitics of Renewable Energy

(RE) began receiving prominence in the recent years. With the growth of clean sector owing to global climate mitigation initiatives and with the surging investment in the sector in order to enhance energy access across all sections of populations, the share of RE in total energy mix is witnessing noticeable progress. The International Renewable Energy Agency notes that with the falling capital cost of RE development has become more attractive to countries. Capacity additions based on RE for electricity generation witnessed remarkable progress during 2013-2015 in the world and China evinced the highest growth in the same.

In the recent years, renewable sector emerged as a platform where the two countries are competing for securing greater geopolitical prominence. Unlike the competition to secure 'access to resources' or 'monopoly over exploration, production or transportation' or 'bagging agreement for long term purchase' in conventional energy sector, which is often defined the energy geopolitics in the fossil fuel context, the new geopolitics brought in an entirely different perspective on how India and China interact. Securing unchallenged access to 'renewable equipment and technology consumer network (market)' dominated the new energy geopolitics. In simple terms, while the conventional energy geopolitics were mainly about 'securing access to resource in specific geographies' the new geopolitics was about how to 'ensure market access for one's own RE technologies and how to secure investment opportunities' to maximise profit.

## Geopolitics of Renewable Energy

The India-China geopolitics in the RE sector was often evinced as the two seek to expand their influence in the renewable and alternative energy domains of Southeast Asia (SEA) and South Asia. As renewables emerged as a key agenda in every developing economies energy planning, availability of technologies at affordable cost became a critical factor in the integration of the same in mainstream energy supply systems. Despite the fall in capital cost in the RE sector, domestic industry fared poorly in terms of affordable storage systems, solar panels, wind mill equipment etc. Moreover,

technological availability to produce efficient energy systems also played a key hurdle in the development of RE supply in these economies in Asia Pacific. Here, both India and China found a flourishing market for their equipment and service industry that have already made notable presence domestically.

The scope for alternative energy development is huge in the SEA and South Asia. With regard to SEA, more than 95% of the total energy demand in the region is from 6 countries (Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam-ASEAN 6) out of the 10 ASEAN members is met by fossil fuels currently. Fossil fuels constitute about three fourth of the energy mix in the region while the remaining demand is met by conventional biomass combustion.

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Nearly all ASEAN-6 countries have adopted medium- and long-term targets for RE and announced carbon dioxide (CO<sub>2</sub>) emissions reduction targets in support of the Copenhagen Accord (IEA 2010). The emission reduction targets of fossil fuel usage have become an important policy step in these countries. However, there are several critical challenges faced by the SEA with regard to the development of alternative sources. Non-economic barriers including lack of technological support, lack of information and training along with distortionary subsidies to fossil fuel continue to be major challenges to the development of alternative and RE sources in ASEAN 6 (IEA 2010).

In South Asian region, India is the largest consumer of energy. Nepal and Bhutan are rich in hydroelectricity while Bangladesh has natural gas reserves sufficient enough to last for another 12 years with the current level of production. In Sri Lanka, hydro and wind together constitute

about 56% of total primary energy consumed, while coal and oil together constitute only about 46%. Pakistan is a net importer of crude oil which accounts for about 31% of the total primary energy consumption. RE plays significantly low share in the energy mix of the country and has noted no commercial production yet. Myanmar (Burma) is an important natural gas producer in the South Asian continent exporting about 70 percentage of their current output. Development of alternative energy sector is critical to this region for three reasons, namely, (a), the increasing energy demand, (b) need to reduce emission intensive fossil fuel consumption and (c), ongoing electricity shortages.

In the last few years, several government level agreements have been reached by China as well as India with the countries in South Asia and SEA in the RE arena. In the past India - ASEAN Ministerial Meeting adopted a resolution which would become the guiding principle for cooperation and interaction in RE between India and ASEAN member countries. India looks at exploring opportunities for energy cooperation with ASEAN countries on various fronts such as promotion, deployment and financing of energy projects. India's Look East Policy, growing interest in the regional energy trade and strategic interest in the region all have shaped deeper involvement in these regions. On the alternative energy front India has been cooperating with Southeast Asian countries through ASEAN. While there is no opportunity for direct electricity import from ASEAN countries, what attracts India to the Southeast Asian market is its huge potential for RE demand.

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On the other hand China maintained long term relations with the Southeast Asian region. Ming Dynasty's relations with the region (Wade 2004), the presence of Chinese diaspora in the Southeast Asia region, and China's military

interests are evidences of China's long term interactions. Though during the pre-1990 period, China was generally perceived as a threat in SEA due to its conflicting territorial claims in the region and certain military skirmishes with some of the countries, the perception began to change following Beijing's interest in stronger economic ties. In November 2004, China and the ASEAN agreed to gradually remove tariffs and create the world's largest free trade area by 2010. The bilateral trade agreements China signed with ASEAN countries formed one of the most important platforms in the bilateral ties. Even on the energy front these trade agreements have substantially helped China strengthen its ties with the region.

The geographical proximity of South Asia has been one of the critical factors in making India a leading player in the region. Moreover analysing the recent history of the region, one can witness that India has played important role in the political as well as economic domain of the countries in South Asia. Formation of Bangladesh, political changes in Maldives, economic and political support to Nepal and Bhutan, domestic politics with regard to issues in Sri Lanka has been some of the factors. India's interaction in these political and economic domains positively contributed to strengthening relations.

However, the issues relating to Pakistan's sponsoring of cross-border terrorist activities in India (Tellis 2008) have limited the scope for any full scale collaboration in the energy front except the export of some petroleum products. China's entry into the South Asian Association of Regional Cooperation (SAARC) and close ties with some of the countries in the region is emerging to be a major challenge to India. China's influence in South Asia is primarily through the smaller countries in the region with which Beijing is strengthening its relations. One successful development for China in the South Asian region was its entry into the SAARC framework in which it obtained the observer status despite India's opposition to it.

India's regional energy ties in South Asia focus on a bilateral level negotiations with countries such as Nepal, Bhutan and Bangladesh. Nepal has been politically and culturally close to India

for long. This has remained one of the most important factors that bond the bilateral relations of both countries. India has invested in the Nepal's hydroelectric power facilities through private players. India has also invested in Nepal to support its energy sector, building roads and railways. One of the leading private Indian company, GMR group is developing 900 MW hydropower facility development project located in the Karnali River, in Surkhet, Dailekh and Achham districts of Nepal (Hindu 2014).

Nepal has also been of critical importance to China as the country it borders in the Himalayan region. One of the areas where India and China become close competitors is in Nepal's hydropower sector. For the past few years China has been showing keen interest in investing in Nepal's hydropower. In 2014, China's state-backed Three Gorges International Corp. was negotiating with Nepal over construction of a \$1.6 billion power plant over the Seti River in western Nepal that can generate 750 megawatts of electricity (Yahoo News 2004). China also showed interest in assisting Nepal 'in a variety of sectors, including agriculture, infrastructure, science and technology, tourism, security and law enforcement' (Xinhua 2016) by giving aid.

India has been an electricity importer from Bhutan for several years. In 2011-12, the total import of electricity amounted to 5252.7 Mkw which is 0.5 percentage of the total electricity generation in India for the same year. For the past many years China has been interested in investing in Bhutan's energy sector. China has been increasing its aid and support to Bhutan. Bangladesh has been on India's energy radar for long time especially due to its natural gas deposits. There were also proposals to build gas pipeline from Myanmar – via – Bangladesh to - India. However, that proposal did not take shape primarily owing to the political concerns within Bangladesh. Currently India is also exporting electricity to Bangladesh since October 2013 with the inauguration of Bangladesh - India Power Transmission Centre at western Bherampura, adjacent to West Bengal (Economic Times 2013).

## Why Competitive Advantage for China?

Today China is the biggest player in the global RE market, not only because of its huge share of RE investment, but also in terms of its market reach within and outside the Asia Pacific region. Unlike the other Asian countries China has already made long term plans to reduce dependency on the coal power generation following the intervention by its energy regulator, National Energy Administration. The investment in domestic arena is surging as well as in the international market. In 2017, \$32 billion (Kejun 2017) worth of investment was done by China in the overseas market, more than any other country's investment outside its boundaries. Similarly, manufacturers from RE sector in China have already made remarkable progress in terms of investment in innovation and development of advanced technologies in order to excel in the quality of equipment produce. Experts opine that, China is emerging as 'major source of both energy demand and cutting-edge technology, implying that it will have a unique opportunity to provide global leadership' (Kejun 2017) in clean energy sphere.

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While the global renewable energy market is undeniably benefitting from China's emergence as a major supplier of cheaper RE equipment as well as an investor and fund donor, there are mixed responses from many countries which are facing increasing competition from the Chinese companies. Today five of the top solar module manufacturers in the world and five of the largest wind energy companies are from China. The sheer size of these companies and their investment potential as well as their ability to secure access to overseas markets are often seen as a critical challenge by the

domestic industries in host countries. The ability to compete and win over counterpart market players in other regions are largely due to two factors. First the State support to Chinese companies ensure larger space of its market access. It is believed that, traditionally the conventional energy companies have been supported by the State government in securing oil and gas assets.

The huge global presence of these companies, often state-owned, were made possible by the support provided by the government. The energy players were also identified as part of the 'Strategic Emerging Industries' in the 12<sup>th</sup> Five Year Plan, which helped the State to channel financial and regulatory support smoother operation in the overseas market. On the other hand, Chinese companies also undergo a significant level of competition within its domestic arena owing to the increasing competition from other domestic players. Eventually these market scenario makes Chinese industry perform better in the international market.

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In the competition with India too, Chinese companies are able to secure access to the RE market better than Indian companies. Michael Porter, in his National Competitive Advantage (NCA) theory, argues that 'nations succeed in particular industries because their home environment is the most forward-looking, dynamic, and challenging' (Porter, 1990). In case of India and China too, one can notice that the latter has certain level of noticeable advantage that help build faster and closer ties with the smaller countries in the region. These are 'Factor Endowment', Strategy, 'Demand Conditions' and 'Supporting Infrastructure'. The factors of production, such as skilled labour or infrastructure, necessary to compete in a given industry' are the basic elements that

strengthen the domestic energy industry in China.

The country attracted more than double the RE investment of its nearest competitor, the US. The country also made huge progress in the solar, wind and biomass technologies. Apart from policy support and economic incentives, the most important aspect is the cheap labour in China which makes economy of scale difficult to compete. In terms of demand conditions, Chinese companies have witnessed surging renewable electricity needs in the market. China's 'Renewable Energy Law 2005' and other policy initiatives have been key catalysts in this regard. The third factor that strengthened the domestic industries in China is the presence of 'Related and Supporting Industries'. Unlike the industry in India, where renewable sector depended heavily on external supplies for machine parts or raw materials, Chinese RE sector managed to meet its demand largely from within the country. 'Firm strategy, structure and rivalry' were also seen as major factors that contributed to the growth of domestic energy industry. While strong anti-monopolistic law facilitated fare competition among industry players domestically, many of these companies in China also had opportunities to horn their business strategies in various countries across the world.

The above mentioned four factors ensured that Chinese domestic industry is capable of entering into any energy market and perform better than their counterparts from other countries. With these advantages the Chinese companies were able to secure easier market access in Southeast Asian and South Asian regions.

### **China's competitive advantage in RE industry: What is at stake for India?**

Geopolitics often dominates India-China interaction in overseas energy market, be it access to conventional fossil fuel sources or access to market as in case of RE sector. While the Chinese presence in many of the oil and gas rich regions have already posed challenges to India's interests for the past many years, the energy geopolitical on the renewable sector is newer development. There are three critical challenges India will face due to the increasing

Chinese competition in the alternative or RE front in the Asia Pacific region. First, with the growing dependency on the Chinese energy equipment supplies, the Indian industries involved in alternative energy business have reduced to distributors and retailers rather than being able to involve in the production activities. This would further limit the growth of India's RE industry and can be an impediment in achieving expected goals in terms of energy generation.

Second, the cost competitiveness of Chinese clean energy equipment have already captured significant share of the market in developing economies in Asian region. RE sector being an important arena in every countries' climate mitigation plans and economic goals, China will continue gain more prominence in these regions. Third, while the loss of business opportunities is an important issue for Indian RE sector, smaller Asian countries moving closer to China is also be a concern. For many of the Asian economies the Chinese clean energy industry remain a key driver for energy transition, making Beijing a critical partner in the long term developmental goal of smaller economies.

The two competing for more space in the clean energy sector in Asia Pacific region will get intense in the coming years as the demand for RE supplies will increase in the smaller economies. However, it is evident that, Chinese companies will outpace Indian counterparts in securing greater market access with the politico-economic competitive advantages it possesses.

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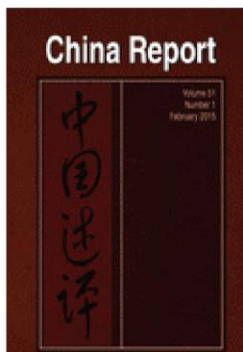


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