

Geopolitics of Energy: An Indian Perspective

The Hydrocarbon Vision 2025, published by the Government of India in February 2000, starkly sets out India's energy security predicament: its crude oil self-sufficiency declined from 63% in 1989-90 to 30% in 2000-01. In the future, the situation is likely to get worse: India's demand for oil is expected to increase from 122 million tonnes in 2001-02 to 196 million tonnes in 2011-12, and 364 million tonnes in 2024-25. Domestic production during this period would increase from 26 million tonnes to 52 million tonnes in 2011-12, and to 80 million tonnes in 2024-25. In 2024-25, crude oil self-sufficiency would be a mere 15%. The situation relating to gas is equally grim.

In response to this negative scenario of India's energy security, the Vision 2025 document sets out an elaborate Action Plan for the acquisition of hydrocarbon resources required by the country to meet its economic requirements. It provides, inter alia, for a robust effort to expand domestic production of oil and gas through the liberalization of the oil sector, encouragement to the entry of private Indian and foreign companies, investments in technology and R&D, etc.

Since the study was the first of its kind in India, it had certain obvious limitations as it only looked at the hydrocarbon (oil and gas) scenario, and did not touch upon the other sources of energy required for national development. The Integrated Energy Policy document published by the Planning Commission in August 2006 corrected the shortcomings of the Vision document by taking a holistic view of India's energy requirements to meet a minimum growth rate of eight percent per annum up to 2031-32, i.e., the end of the 15th Five Year Plan. Given the high level of import dependence and the need to obtain the latest foreign technologies to enhance the country's domestic resources and capabilities that are set out in this document, India has to commit itself to pursuing a robust "Energy Diplomacy" consisting of substantial, pro-active and multi-faceted engagements across the world to promote India's energy security interests. These overseas engagements are aimed at achieving the following:

- Significant enhancement of domestic resources and capabilities by bringing in state-of-the-art technology and expanding the national knowledge base.
- Acquisition of two types of assets abroad: (a) Equity participation on producing fields. (b) Exploration and production (E&P) contracts, both on-shore and offshore, in different parts of the world.
- Participation in downstream projects (refineries and petrochemicals) in producer and consumer countries on the basis of criss-cross investments.
- Finalisation of long term LNG contracts.
- Setting up of transnational gas pipelines.

- Obtaining technologies to promote sustainable energy use, including conservation; increased use of environment-friendly fuels; and development of unconventional and non-conventional energy resources within the country.
- Promotion of intra-Asian dialogue between producers and consumers; encouragement for intra-Asian investment; and development of Asian capabilities, resources and infrastructure.

India's long term interests lie in setting up alliances at bilateral, regional, and global levels that would bring together different capabilities in joint partnerships. The proposed cooperation ranges across the energy value chain, and includes prospecting in each other's territories, and developing downstream and petrochemical capacities in addition to exchanges relating to R&D, technology, safety norms and training. Beyond the bilateral aspect, it includes the possibility of Indian and foreign national companies working together on specific projects in third-world countries. The Indian hydrocarbon strategy has already begun to yield some positive results. We have a 25% equity participation in a producing field in Sudan, which provides India with three million tonnes per annum. We have also secured E&P contracts in Sakhalin (Russia), Nigeria, Oman, Iran, Vietnam, Myanmar, Venezuela, Colombia and Cuba.

It is important to note that India's external hydrocarbon strategy is being implemented in a highly competitive international environment which is made up of international and national oil majors contending vigorously for assets in the few new areas in which they are available, i.e., the Caspian, in Western and Central Africa, and in some parts of Latin America, while consolidating their presence in the Gulf. The scramble for oil resources poses a unique challenge to India's energy diplomacy in that it requires us to explore new engagements or, alternatively, to imbue traditional political relationships with a new, energy-related value.

The logic of Cooperation for Energy Security

While the competition for energy resources has drawn considerable attention from academic circles and the media on account of its dramatic value, the global energy discourse is in fact dominated by the realization that energy security must be pursued in a cooperative spirit, which can actually bind nations together in a mutually beneficial embrace. Commentators on global energy security issues and representatives of the international oil industry tend to emphasize global interdependence as the central characteristic of global energy security. As Daniel Yergin has put it:

The truth is that there is only one global oil market, and the US is part of it. Moreover, energy markets, like the rest of trade and finance, are ever more internationally entwined. Energy security does not reside in a realm of its own, but is part of the larger pattern of relations among nations. How those relations go will do much to determine how secure we are when it comes to energy.

On the same lines, the American Petroleum Institute (API), representing the US oil and gas

industry, has observed:

The world energy markets are inherently global, and no single country can exempt itself from the interdependencies of that market. Geographical differences in the location of supply and demand will continue to expand trade. Differences in resource ownership and access to capital and technology will require increasing cooperation between IOCs and NOCs. The consuming and producing countries share a mutual interest in this expansion, and in avoiding volatility. In fact, these interdependencies generate a web of mutual interests between producers and consumers, which can provide a basis for reducing the security problem.

There is now an increasing realization that interdependence is central to energy security and that the emergence of major consumers in Asia has fundamentally changed the global energy equations. This understanding was confirmed when the G-8 member countries consulted with principal developing countries, such as China, India and South Africa, in July 2006, on the eve of the St. Petersburg Summit, which issued a “Global Energy Security” document for the first time. This document recognized that “energy is essential to improving the quality of life and opportunities in developed and developing nations.” It identified the following challenges in ensuring “sufficient, reliable and environmentally responsible supply of energy”:

- high and volatile oil prices;
- growing demand for energy;
- increasing import dependence in many countries;
- enormous investment requirements along the entire energy chain;
- heightened need to protect the environment and tackle climate change;
- increasing vulnerability of critical energy infrastructure; and,
- growing political instability, natural disasters and other threats.

The G-8 leaders also accepted the “global nature” of these challenges and the growing interdependence between producing, consuming and transiting countries, which requires “strengthened partnership” between all state actors to enhance global energy security.

There is now a slow but steady acceptance that, by pursuing policies of cooperation, energy resources can be harnessed more efficiently for regional and global development. For instance, the oil market is already integrating in significant ways: there is a clear trend in favour of oil companies integrating across the hydrocarbon value-chain, from exploration, production and transportation, to refining and petrochemicals. E&P proposals in producer countries are increasingly being linked to refinery proposals and, on occasion, to other infrastructure development proposals, such as roads, railways, mining, and port development projects. With hurricane Katrina damaging US facilities across the entire supply system in the region, energy security has been re-defined to mean, as Yergin has noted, “the security

and integrity of the whole supply chain and infrastructure from production to consumer.” Above all, the surge in global demand for hydrocarbons represents, in Yergin’s words, “the success of globalization – the best global economic performance in a generation.”

India does not see the pursuit of its own, or of Asian or global energy security interests, in competitive terms. While maintaining a country’s national interests lies at the core of national security, India believes that energy security cannot be attained on a purely national basis. Its policy is inherently cooperative in character and is founded on engagements and mutually beneficial partnerships with other countries. Considering that hydrocarbon resources will continue to dominate the global energy mix for at least the next 25 years, if not longer, for the world’s energy resources to be harnessed efficiently, a cooperative approach at the bilateral, regional, and international level is both inevitable and urgent. India’s experience in regard to energy cooperation is examined in the following paragraphs.

Bilateral Cooperation

India has set up a series of “strategic energy partnerships” with different countries, some of which are:

- The Gulf countries are the principal source of India’s oil imports (65%) and, hence, are potentially India’s major energy partners in respect of both upstream and downstream areas as also of investors in India’s refinery and petrochemical sectors.
- China: India is looking at multi-faceted cooperation across the hydrocarbon value chain, and also at joint bids in exploration and other projects in third world countries.
- Russia: India is already a major investor in the Sakhalin-I oil and gas project, and is looking at expanding its role in the development of Russia’s oil and gas potential as also in working with Russian companies in third world countries.
- Central Asia: India is looking at equity participation in the oil and gas sectors in this region, as also in the development of gas pipeline projects.
- Japan & Republic of Korea: Both of them have highly developed capabilities in regard to energy efficiency and the use of new and renewable energy and, hence, are partners in regard to the enhancement of India’s knowledge-base in conservation, environment friendly fuels, and strategic and commercial storage.
- Nigeria, Angola and Sudan: Indian companies are already well-placed in Nigeria and Sudan in regard to exploration as also equity participation in producing fields. India is actively pursuing partnerships with other Saharan and sub-Saharan countries to develop their potential.
- Latin American countries: Countries such as Venezuela, Brazil, Colombia, Ecuador and Cuba have offered exploration contracts to Indian companies and are in a position to share their technology in regard to production and refining of heavy oil.

- Norway: It is a world leader in regard to deep sea exploration as also in other aspects of the hydrocarbon industry, such as technology, health and safety.
- USA, UK, Canada: These are world leaders in regard to research and development pertaining to conservation, efficiency and use of unconventional and non-conventional fuels, e.g., gas hydrates, coal gasification, gas to liquid, coal bed methane, and ultra deep exploration.

Transnational pipelines

Transnational oil and gas pipelines are not only able to transport large quantities of hydrocarbons across hundreds, and even thousands, of kilometers, but, given their reach and range and the terrain they traverse, they also have significant geopolitical implications and even the ability to influence bilateral relationships and regional cooperation scenarios.

In order to meet its gas requirements, India is vigorously pursuing gas pipeline projects on its land frontiers. For instance, the Iran-Pakistan-India pipeline is expected to bring to India nearly 90 MMCMD of gas which will be utilized to fuel power and fertilizer projects in North and North Western India. India has also agreed to participate in the Turkmenistan-Afghanistan-Pakistan pipeline (TAPI).

These proposals could be part of the Asian Gas Grid which envisages the setting up of a series of pipelines that will carry natural gas from North and Central Asia and the Gulf to the various consumption centres in South and East Asia. According to 2005 estimates, 22,500 kilometers of additional pipelines would be required to realize the Asian gas grid which would cost about US\$ 22 billion. The Asian continent, Russia, the principal Asian consumer countries, and the major Gulf producer countries, would be able to provide the required financial and technological resources for the project.

These pipeline proposals, being trans-national in character and involving neighbouring countries with complex histories in terms of bilateral relations, are fraught with political and security-related problems that would need to be addressed. If these projects are to be realised, it must first be accepted that they are extremely important, indeed critical, for Asia's energy security interests. Once this is understood, international best practices can readily yield arrangements that would put in place security-related inputs in regard to all aspects of these projects – technical, financial, commercial and legal, that would serve to insulate the projects from the vagaries of day-to-day politics and provide the desired level of comfort to our policy-makers.

Multilateral cooperation

In recent years, oil-related think-tanks have engaged in a debate on whether supply of hydrocarbons has 'peaked' so that the next few years will see a steady decline in supplies, with consequent implications for prices, economic development programmes and heightened political contentions. However, the emerging view is that hydrocarbon resources are available to meet demand over the next 30-50 years. Historically, though predictions of 'peak oil' have

been made from time to time, global production has regularly increased to meet demand. As Daniel Yergin has pointed out, new technologies have made it possible for oil companies to find new sources of oil and extract oil from old sources. Still, there is no room for complacency since new oil will be available in physically challenging areas such as the deep sea, frozen terrains, or environmentally sensitive locations. Again, it will require very huge investments for its extraction, amounting cumulatively to about \$ 5 trillion up to 2030, at the rate of \$ 20 billion per annum.

Meeting the global demand for oil and obtaining the financial resources to ensure supplies requires the rejection of political contentions based on narrow national considerations and, instead, calls for an integrated global effort to pool together the world's human, financial and technological resources to explore and develop these difficult and sensitive areas in a spirit of cooperation based on mutual benefit.

India took the first significant step towards such cooperation, at the regional level, by convening a Round Table in New Delhi, in January 2005 where the four principal Asian oil-consuming countries – China, Japan, Republic of Korea and India - got into dialogue with the principal oil-producing countries of West Asia and South East Asia. This was complemented by the initiative to bring together, in November 2005, the same four principal Asian oil-consuming countries into dialogue with oil-producers of North and Central Asia, including Russia, Kazakhstan, Uzbekistan, Azerbaijan, Turkmenistan and Turkey.

The assembled Ministers agreed on the importance of this first dialogue between Asian consumers and producers, and, in a consensual statement, identified a substantial commonality of interest as also other areas of cooperation. They also recognized that, for the interests of the Asian consumers and producers to be pursued effectively, the knowledge-base of Asian countries would have to be expanded even as Asian producers and consumers developed policies and programmes linked with the promotion of criss-cross investments in each others' hydrocarbon sectors as also in the areas of conservation, efficiency, and environment protection.

This regional dialogue has thrown up a number of specific areas for cooperation which includes: reform of the Asian oil markets; promotion of criss-cross investments in hydrocarbons between producers and consumers; development of strategic reserves; development of the Asian gas pipeline grid; development and transfer of R&D and technology; and development of capabilities to promote energy conservation and efficiency and environment-friendly fuels. The Ministers have agreed to meet annually to pursue their consensual plan of action.

Conclusion

The last decade of the twentieth century saw the emergence of the Central Asian republics as sovereign states, although West Asia and South Asia remained areas of fierce contention, with violence perpetrated by state and non-state actors, from within the continent as also from major external powers, continuing to intervene in the region in pursuit of their interests. Thus,

after more than 250 years of colonial domination and internecine conflict, it is only in the last few years that Asian countries have begun to see the prospects of peace and the opportunity to pursue intra-continental interests. This does not mean that longstanding bilateral issues involving the principal Asian states have been resolved. Indeed, in some cases, they have even been given a new resonance and continue to provide opportunities for outside players to intervene as hegemonic role-players rather than benign partners.

However, the Asian scenario is not entirely bleak. Opportunities have also emerged to pursue energy interests through cooperative ventures that include investments in upstream and downstream hydrocarbon projects, sustainability proposals and infrastructure projects, particularly transnational pipelines. Pipelines are particularly daunting in an Asian environment which has been the arena of considerable intra-continental discord and conflict, and has relatively few success stories in regard to regional and continental cooperation. It is also true that some issues that divide Asian countries, particularly neighbours, are fairly complex and are unlikely to be resolved in the near future.

While there are serious challenges in pursuing cooperation projects, the common interest of energy producers in having stable markets and of consumers in having assured supplies for their economic development programs imparts enduring attention and urgency to these projects. Though Asia has relatively little experience in energy cooperation, the availability of abundant hydrocarbons within the continent, coupled with the overwhelming demand for this resource, ensures that national interests and energy security concerns can and should coalesce.

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This Article was published in India Energy Security Summit, 2011, IPPAI Research Publications