

Bridging the Energy Gap in Asia: Experience of Strategic Alliances/Joint Ventures in India

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Global primary energy consumption is expected to reach a level of 11560 million tonnes of oil equivalent (mtoe) by 2010 as against 8104 mtoe in 1996 which would represent an annualized growth of 2.4 percent during the period 1996-2010. The growth rate in the Asia-Pacific region is expected to be around 4 to 5 percent as against an average rate of 2 percent for United States and for the world as a whole. The higher growth has been attributed to rapid population and economic growth, increasing industrialization and road transportation, diminishing availability of noncommercial sources of energy and opening up of energy markets in Asia. India and China together account for 47.5 percent of the total Asia-Pacific demand. The growth in energy consumption has shifted the center of the world's oil and gas demand from United States to Asia. In India, the consumption of petroleum products is expected to increase from the present level of 78 million tonnes (mmt) in 1996-97 to 113 mmt by 2001-02 and 149 mmt by 2010-11. The objective of the oil and gas industry in Asia, in general, and India in particular, is to meet this growth efficiently and on a secure basis.

During 1980-90s, Asia-Pacific, including the Indian subcontinent, overtook the European Community, to become the world's second largest petroleum market after North America. Over 70 percent of the world's incremental consumption during this period was attributable to the region. Between 1996 and 2010, the Asia-Pacific region is expected to add about 200 to 250 million tonnes per annum refining capacity to supply a market growing at 4 to 5 percent annually. A review of capital expenditure plans of the eight largest multinational companies indicates that they collectively invest about US\$25 billion per annum in oil exploration, production, refining and marketing activities worldwide. This implies that even the largest oil/gas major can commit to a new refinery investment in Asia only every two or three years. Moreover, participation in the Asian refining industry by foreign national oil companies has historically been much lower than for the majors. India's own requirement of one quarter of the Asia-Pacific refining capacity during this period represents an enormous capital demand in the global downstream petroleum industry. Therefore, India will need to encourage investment by a range of major private institutions, both domestic and foreign, to raise the required amounts of funds over the next decade and beyond. Potential foreign sources of project financing include long term debt from multilateral agencies like the Asian Development Bank, the World Bank, Japanese lending banks, Global Depository Receipts (GDR), equity investments, credit from oil/gas equipment suppliers, and equity participation in strategic alliances/joint ventures. Multilateral and private lending institutions prefer joint ventures partly because they entail less government involvement. Such ventures can apply private sector industrial practices, which typically translate into greater labor productivity and flexibility.

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The ASEAN experience demonstrates the critical role of the energy sector in building infrastructure for economic development. The commercial energy consumption per unit of Gross Domestic Product (energy intensity) of the South-East Asian economies rose steeply throughout the 1960s, reached a plateau in the late 70's and then declined as these countries expanded into higher value-added manufacturing services. Today, oil usage intensity in East Asian populous developing countries such as China and Indonesia, is two to three times that in the developed economies of Germany and Japan. With India in an energy-intensive phase of economic development, ensuring adequate distribution of hydrocarbon products will be critical to achieve balanced economic growth over the decade.

Despite considerable refinery investment activity in the Asia-Pacific region, continuing high demand growth and a low overall level of refinery capacity are expected to result in a significant deficit of key petroleum products. In particular, India and other developing Asian nations will need to import large quantities of diesel to keep pace with the continuing surge in transport and industrial demand. Notable shortages are also likely to develop in Naphtha (used as a petrochemical feed stock and as a fuel for power generation) and LPG even if all announced projects are completed on time. By 2000-01, India will account for about 15 percent of Asia-Pacific demand for these products. The regional trade in crude oil is substantially deeper than in petroleum products and probably offers a strategically superior source for India, particularly given its proximity to Middle East countries. Among the Middle East national oil companies, Saudi Aramco, Kuwait National Petroleum Company, Abu Dhabi National Oil Company, Oman Oil Company, and National Iranian Oil Company have been the most active participants in Asia. Saudi Aramco, which has a stake in Ssangyong Refining of South Korea, is also involved in a number of joint ventures in Japan, Taiwan, Philippines, Pakistan and India. Oman Oil Company may take a stake in a new refinery in Thailand, promoted by Caltex and PTT, the Thailand State Oil Company, and is also negotiating with the government of India. The National Iranian oil company has proposed a joint venture refinery with Petro Refining and Petrochemical Corporation, State Oil Company in Pakistan.

Expanding India's upstream and downstream hydrocarbon sector to meet the rapidly growing demand for oil/gas will require massive capital investment on the order of US\$ 30-40 billion in real terms. The foreign exchange component of this total is approximately US\$10 billion. This investment is required for the development of onshore and offshore exploration, production of oil and gas, refining crude and petroleum products, storage and marketing installations. Much of the investment in the upstream and downstream sectors is likely to flow through existing and new domestic and international companies. Assuming that lending to these new companies will be guided by international norms (i.e., debt - equity ratio of 2:1) India's total capital requirement for the petroleum industry will increase to about US\$10 to 12 billion in equity and US\$24 to 26 billion in debt. However, neither India's public sector equity funding nor the domestic capital market appear capable of meeting these requirements. The magnitude of required investment implies that the hydrocarbon sector must continue to rely on foreign sources of long term debt to fund its expansion program and allow

joint ventures which are distanced from government involvement. The public sector undertakings (PSU) in the Indian petroleum industry view private joint ventures (JVs) favorably because: (1) JVs allow the PSUs to deploy their scarce equity resources more effectively, thereby accelerating expansion (e.g., PSU may promote a joint sector project with only 26 percent equity participation), (2) raising funds in the primary capital market is likely to be easier with a reputable private partner, (3) JVs offer the potential for the transfer of private sector management practices and foreign technologies, and (4) JVs may permit greater autonomy in decisionmaking, particularly with respect to new investments and plant operations because JVs are typically outside government controls.

Governments in several Asian countries are pursuing industrial deregulation and restructuring (e.g., price decontrol and selective introduction of competition) to improve efficiency and service quality, in preference to a radical change in private ownership. In Taiwan, for example, liberalization of the lubricants market and the introduction of private ownership for fuel retailing have created awareness of the need to improve the cost and service performance of government owned companies, e.g., China Petroleum Corporation. Such changes are being implemented in Indonesia, Malaysia, Philippines and Thailand. These changes may represent the first step toward the large scale privatization that has been conducted with considerable success in Latin America and Western Europe. In Spain, the need to open the large state-owned refining and marketing industry to the competitive forces of the European Community by 1992, provided the motivation to simultaneously deregulate, restructure and privatize the hydrocarbon sector over a 7 year period. Today, the Spanish petroleum sector operates with minority government ownership and financial commitment and is competitive and integrated with European import markets. A similar program in Argentina was undertaken in response to the poor performance of the petroleum sector and macroeconomic crisis. This has created an estimated US\$ 1.5 billion in shareholder value in refining, distribution and marketing activities of the privatized YPF, the state oil company.

The Government of India (GOI) has recently taken a number of important steps to enhance the attractiveness of private capital in the petroleum industry. These steps included partial decontrol of prices, enhancement of investment in the last several Union budgets and some improvements in approval procedures. The GOI has freed kerosene and LPG prices and allowed partial private sector distribution of these sensitive products. Lubricants are totally decontrolled and delicensed. The Indian economy has witnessed more than 20 private players in the lubricants market (both automotive and industrial components) with half a dozen joint ventures in the marketing of LPG, kerosene, LSHS, and Naphtha (restricted to captive uses). Private domestic and foreign companies have been offered 100 percent equity in exploration and production (E&P) with joint venture options with the Oil and Natural Gas Corporation (ONGC), Oil India Limited (OIL), and State-owned E&P companies. Small and medium sized proven oil/gas fields are offered on concessions. This has generated interest in domestic and international oil companies seeking an integrated presence in India.

Joint ventures in medium sized fields like Mukta, Panna, and Tapti Ravva include ONGC, Enron, Reliance, Command Petroleum, Tata Petrodyne, Marubeni and Hindustan oil exploration companies. ONGC Videsh Limited has a JV with Statoil, Norway and British Petroleum in Vietnam has already discovered 2 tcf of gas and is in the process of forming more JVs with National Oil companies of Yemen, Kazaksthan, Egypt, Turkmenistan, Tunisia, Nigeria and other former Soviet Union countries to bring "equity oil/gas" to India. Negotiations are on with Ensearch Inc. and ONGC for the development of small sized fields in the United States. JVs are in operation in Norway, UK, USA, and Germany for development of state-of-the-art technology in exploration and production. In the case of refineries, letters of intent have been issued to more than 10 private companies to build around 24 million tonnes per annum of refining capacity (i.e., 480 thousand barrels per day) by the year 2001-02. The first joint venture refinery, Mangalore Refinery and Petrochemicals Limited (MRPL), has started commercial production of 3 million tonnes per annum (60,000 barrels per day) and will expand another 60,000 barrels per day by 2000-01. Other JVs are Indo-Mobil (i.e., Indian-Oil Corporation-Mobil Inc., USA), Bharat Petroleum Corporation-Shell International, IBP-Caltex, Hindustan Petroleum corporation with ESSO and Total, among others. Moreover, GOI has diluted state ownership in downstream new projects in the range of 30 to 40 percent to promote joint ventures and private funding. The last several Union (federal) Budgets have slashed custom duties for petroleum products from more than 100 percent in the 1980s to 25 percent in the mid-1990s to make capital goods imports more competitive with those of Asian countries. The Union Budget of 1997-98 has removed custom duties and excise duties on plant and machinery required for Indian private/public/joint venture expansion/debottlenecking for grassroots refineries. Domestic suppliers of equipment to refineries will also get needed export benefits in terms of tax concessions. A New Exploration Licensing Policy (NELP) has also been announced to attract risk capital in exploration and production with a package of fiscal incentives, e.g., tax holidays, reduction and exemption of royalties to be paid to State Governments in frontier/deep offshore areas/marginal oil/gas fields, freedom of marketing of oil/gas to PSUs/government/outside agencies, etc. With the import content of upstream and downstream investments, currently estimated at about 15 percent, and India's already strong position in equipment fabrication costs, this progressive reduction in tariffs would distinctly improve the cost structure of private, public and joint venture producers in the petroleum industry.

While government control of the domestic upstream and downstream sector is likely to continue, GOI has adopted a number of flexible structures to promote joint ventures to take advantage of India's vast energy market. JV partners will sign long term contracts for the sourcing of imports of crude oil and petroleum products for domestic distribution and the exporting of the rest in the case of export oriented refineries. Revenue from exports will then be used to pay back the nonrecourse financing put up by foreign partners. With GOI resolve and proper resources brought to bear on JV initiatives, India is committed to meet its critical private investment needs in the upstream and downstream hydrocarbon sectors.