

The Emerging Asian Countries and Energy

Carlos Echeverría

The People's Republic of China and India are two of the world's most dynamic emerging powers – to which we can also add Russia and Brazil – and are the leading Asian economies in terms of growth, with 10 per cent and 9.2 per cent respectively in 2006, followed at a distance by Pakistan, which grew at a rate of 7 per cent. The former is a large factory and the latter a large office that outsources technology on a global scale. Both need energy that they do not produce in order to maintain their growth in two markets that amount to 2,500 million inhabitants, 40 per cent of the world's population. In their search for energy, both countries are forcing producers, both traditional as well as new ones, to accelerate extraction and search for new resources, while Beijing and New Delhi are immersed in a frenetic race to sign supply contracts.

During the 1990s, growth in demand for oil products in China amounted to 7.5 per cent annually – compared to a 5.6 per cent annual rate on the Indian sub-continent – and since then it hasn't stopped increasing. In 1970, both China as well as India consumed a total of 47.7 million tonnes of crude, which rose to 443 million in 2006: 327.3 for China and 115.7 for India. The International Energy Agency (IEA) estimates that China will triple its oil demand by 2030. Although both countries at times compete with each other in Central Asia or in the Gulf, it is important to insist on their progressive rapprochement, reflected at numerous levels and through important gestures, such as the reopening on the July 6, 2006 of the border crossing in the Himalayas, closed since the war between these two countries in 1962, which ended with an Indian defeat. According to the World Bank, by 2040 China could be the world's foremost economic power, while India could be second by 2050. At present, the surge of energy prices is to a large extent down to the strength of both countries, which will be responsible for half the increase in demand until 2030. Additionally, if demand intensifies more

Carlos Echeverría, PhD, Professor, International Relations, UNED (Open University), and Subdirector, Research Unit on International Security and Cooperation (UNISCI).

than anticipated in both countries, production will have to be boosted by 36 million barrels per day until 2015, a quantity that is much higher than the estimated additional 25 million barrels of crude per day announced by producer countries for the same period.

Regionally, China and India's growing energy consumption implies that the role of the hydrocarbon-producing countries of Central Asia is and will continue to be very important in years to come, reaching the level currently enjoyed by the Middle East. To a large extent, Kazakhstan responds to China's thirst for crude, while Turkmenistan could supply the Pakistani and Indian markets with natural gas, if the much sought-after gas pipeline crossing Afghanistan sees the light of day.

Supply to the People's Republic of China

Demand for oil in overpopulated China, which in 2006 had a population of 1,400 million inhabitants, has increased exponentially during the last decade, in which it has doubled its demand for crude, at such pace that in 2003 it consumed 5.6 million barrels, an amount that increased to 6.9 million in 2005. It is currently the world's second oil consumer behind the United States, ousting Japan from this position. It is anticipated that it will go from 1.7 million barrels/day to 9.8 million by 2030, importing today half the oil that it consumes; forecasts predict that by 2020 it will import 70 per cent. Currently China obtains most of its oil from Russia, but as its needs grow it is also contacting other producers, all of which it does through much commercial diplomacy. Where the geographic situation allows, a series of oil and gas pipelines have been designed; thus, it is promoting gas imports from Siberia and the Russian Far East regions, and in Kazakhstan it is behind the construction of a 2,900-kilometres oil pipeline between Atyrau, in the Caspian, and Alashankou, on the border between both countries. China has signed a long-term cooperation agreement on gas with Turkmenistan that guarantees Beijing transit rights for this gas through Uzbekistan.

Although China produces crude, in particular in oilfields situated on its north eastern coast, since 1993 it has had to import oil. The country became an oil exporter in 1973, and at the beginning of the 1980s it increased its production, exporting 600,000 barrels/day in 1985. However, the combined effects of a decline in production due to the oilfields drying up, tied to a surge in domestic demand, led to its transformation into an importer. Between 1990 and 1994 national production increased at an annual average of 1 per cent, while domestic consumption increased 8 per cent annually. The prospect of being able to exploit estimated Chinese reserves – calculated at 16,300 million barrels in 2007 – is obscured by enormous exploration difficulties. In particular, the Tarim basin, situated in the autonomous region of Xinjiang, is the most extensive in the world, but the geographic diffi-

culties in exploiting its estimated 20,000 million tonnes of crude continue to force the country to import.

The rhythm of growth combined with failures in energy supplies that are politically very dangerous – such as the power outages in cities like Beijing or Shenzhen – compel the authorities to guarantee supply. Its traditional supplier of crude has been Russia, which will add to its traditional method of train transport (until 2004 Yukos exported 400,000 barrels a day to China in this way) the new Eastern Siberia-Pacific Ocean oil pipeline, whose construction began in April 2006 and is set to be completed by 2015, and which will essentially supply China and Japan. This will overcome the high cost of and dependence on the railroad network, and will bring to an end the bilateral tensions between the countries that began when Moscow decided in 2003 to cancel the project for the construction of an oil pipeline that would go directly to the Chinese city of Daqing. Instead, Russia accepted the substantial financial assistance that Tokyo offered, and changed the route of the pipeline to a Russian port in the Pacific – a move that would give Russia access to a broader market, and break the Chinese monopoly. But it also created unease, only recently overcome thanks to the commitment to build an oil pipeline with a branch line to China. It will be the world's largest oil pipeline, with a length of 4,000 kilometres and a capacity of 80 million tonnes of crude a year, of which 30 will go to China. The estimated cost of the project will be 10,000 million Euros, 5,500 of which will be invested in the first section, which will reach Skovorodino via the province of Irkutsk, close to the Chinese border, and from where the branch line will part.

Authorities in Beijing are also exploring with Russia the possibility of natural gas supplies, with plans for China to be supplied by 2011 via two gas pipelines, pursuant to an agreement signed by Gazprom with the China National Petroleum Corporation (CNPC) in March 2006 during an official visit by Vladimir Putin to the Asian country. The two gas pipelines will be able to transport between 30,000 and 40,000 million cubic metres of gas a year, one originating in Siberia – the Altai gas pipeline from Urengoi, crossing Surgut and Tomsk all the way to Chinese territory – and the other from the eastern Russian coast.

To Russia and Iran – the latter is the world's fourth crude exporter, providing energy to both China as well as India and Japan – Beijing is adding other suppliers, trying where possible to diversify its supply so as to depend less on oil from the Gulf. In 1998 China signed an agreement with the Iranian National Petroleum Corporation to exploit maritime reserves within the

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Islamic Republic, in China and in other countries that have developed the same capacities over the last few years. Echoing its rapid growth, China's ambition seems to have no limits: it is worth recalling that the public oil company China National Offshore Oil Corporation (CNOOC) submitted an offer to acquire the US company Unocal at the beginning of 2005, provoking angry reactions from the House of Representatives. At the time, more than 40 members of Congress sent a letter to George W. Bush, urging him to force China to withdraw its offer.

It is important at this time to highlight the role played by these Chinese institutions within the energy sector, to which we must add a third: China Petroleum and Chemical Corporation. Thus, PetroChina, whose holding company is CNPC, is today the world's largest company in terms of market capitalisation, with its market value exceeding 700,000 million euros on the first day that it was floated on the Shanghai Stock Exchange, November 6, 2007. At that time it exceeded the joint value of Exxon-Mobil and General Electric, and today it is also quoted on the Hong Kong and New York Stock Exchanges. Although PetroChina's crude and gas reserves (20,500 million barrels in 2006) are lower than the 22,100 million owned by Exxon-Mobil, its strength reflects the unstoppable rise of China's industrial conglomerates. Today PetroChina has lost a large part of its market capitalisation, but it has acquired sufficient assets – estimated at 146,900 million euros at the end of 2007 – so as to be able to finance investments in oil and gas fields within the country, as well as overseas. The CNPC was officially founded in 1988, and in 1999 it created the subsidiary PetroChina, to which it assigned its most valuable assets. In 2006 PetroChina produced 58 per cent of all the crude and 78.5 per cent of all the gas extracted within the country, while overseas it accounted for 20 per cent of oil production and 8 per cent of gas production.

Currently the three large Chinese energy companies extract their resources from 27 countries, within a broad spectrum spanning from Kazakhstan, Venezuela, Ecuador, Nigeria, Angola, Sudan or Chad – as its most visible partners – to others like Azerbaijan, Canada, Peru, or Syria. The various visits by President Hu Jintao to Latin America and Africa during the last four years are a good indication of the frenetic search for energy.

During the second half of the 1990s, China projected an investment of 4,300 million dollars to be made by CNOOC for the acquisition of a 60 per cent share of the main company in Kazakhstan, Aktyubinsk munaigaz. The objective was to contribute to the development of fields within the Central Asian country, and build a 3,000-kilometres oil pipeline to the Chinese province of Jinjiang.

In 1997 CNOOC obtained the rights to develop and exploit two oil fields in Venezuela, and years later, in January 2005, China's Vice President, Zeng Qinghong, signed 17 agreements during a visit to Caracas, the majority relating to supply and concessions for the exploitation of oil and gas,

including the development of 14 fields in the Zunamo region, and plans to exploit within the Orinoco Oil Belt. With this move China set its sights on a Latin American country that in 2005 planned to go from producing 2.9 million barrels a day to 5 million by 2010; subsequently it set its sights on Ecuador, where Beijing is interested in the 533,000 barrels per day that were produced in 2006, and whose policy is closely watched since its recent reincorporation into OPEC.

In Africa, CNOOC has a notable presence in Nigeria, and during the last few years has deployed itself in countries like Angola, Sudan, Chad, Algeria and Libya. Nigeria has the capacity to produce 2.5 million barrels of crude per day, making it Africa's largest exporter (it also produces crude with very low sulphur content), and CNOOC is already present in offshore explorations off the Niger Delta. In Angola, China financed a large part of the reconstruction of the country, lending Luanda up to 8,500 million Euros, obtaining in return access to energy resources. More than half the 325,000 barrels of crude produced daily by Sudan in 2006 went to China, and Beijing, which has been heavily criticised for its support of the Khartoum regime responsible for the dramatic situation in Darfur, recently allowed for a reinforcement of UN blue berets, and has even sent military engineers to the region. Although it benefited from occupying the territory abandoned by the departure of some Western oil companies, the country has also come under significant pressure: as an example, in 2007 Fidelity sold 91 per cent of the American Depository Receipts (certificates equivalent to shares within the US market) that it had in PetroChina in protest at Beijing's failure to act in the face of the human rights violations in Darfur. China has invested 15,000 million dollars in Sudan since 1996, has ignored international sanctions and continues to support increasing production, having reached in 2007 a daily output of 500,000 barrels. Chad, which began production in 2003, has also aroused China's interest, which values both its daily output of 180,000 barrels in 2006, and the oil pipeline that takes it to the Atlantic via Cameroon.

In Asia, Beijing's authorities are making the most of the opportunities that are emerging. Thus, in 1997 the China National Maritime Corporation acquired 40 per cent of an oilfield in Indonesia, an Asian member of the OPEC, situated in the Straits of Malacca, and more recently showed an interest in Malaysia's light *Tapis* oil. In 2007 China took control in Cambodia – which has recently emerged as a producer of crude – of one of the six potential deposits there, and is already the country's largest commercial

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investor, the largest aid donor, and the most eager consumer of its raw materials, besides oil. In Pakistan, the Chinese presence is increasing: its investment, dating back many years, in the construction of the port of Gwadar, in Pakistani Baluchistan, is due to Beijing's interest in importing oil and gas via Pakistan, which will be transported by land down the Karakoram road towards the Xinjiang region. In November 2006, China signed a nuclear cooperation agreement with Pakistan during a visit by President Jintao to Islamabad, which will lead to the construction of at least six reactors, to add to the two existing Chinese reactors. Furthermore, it should not be forgotten that 36 per cent of the natural gas held within Pakistan's subsoil is located in Baluchistan, and there is the prospect of exploring for oil both on land and in the region's maritime waters. In Myanmar, Beijing also ignored international criticism and prevented the application of sanctions in 2007, in part because of its interest in using the country as an oil transit route from the Indian Ocean, and because of its promising gas resources.

Supply to India

With strong economic growth and its 1,100 million inhabitants, India is currently the world's sixth consumer of energy resources, imported from the Middle East, and Saudi Arabia in particular. Its volume of consumption will have doubled in 20 years. Between 2000 and 2005 the country's oil consumption has gone from 2.1 to 2.6 million barrels per day, while imports have increased from 1.5 to 1.8 million barrels per day. Although India's development priorities will require less energy *vis-à-vis* China, it is evident that its need to import hydrocarbons will continue to grow and affect its commercial balance through an increase in prices. India is more vulnerable than China because, despite the fact that it only consumes a third of the oil that it needs, it imports 70 per cent of what it consumes – and foresees importing 85 per cent in 20 years' time, while China currently only imports 50 per cent. Additionally, it does not have strategic reserves.

At present the country solely produces 3 per cent of its energy, but hopes to reach the figure of 25 per cent by 2050. To this end, during the next twelve years it will install at least six nuclear reactors – a total of twelve are anticipated – choosing this energy in the absence of hydrocarbon reserves within its national territory, although it has been attempting to attract investors for many years now with the aim of exploring the Bay of Bengal. However, in the meantime India will need to continue to import hydrocarbons, as a result of which it is trying to create an infrastructure network to access and transport them, while protecting them from possible conflicts. Although, like China, its energy thirst leads it to set its eyes on distant

countries like Venezuela or Sudan, to add to current suppliers like Saudi Arabia or Iran, it also gives priority to the Central Asia region. Thus, New Delhi would like to access Kazakhstan's hydrocarbons, and is participating in two mega projects discussed in the region over the last few years: the Iran-Afghanistan-Pakistan-India oil pipeline, and the Turkmenistan-Afghanistan-Pakistan-India gas pipeline.

In pursuit of these objectives India has resorted to its famous diplomatic skills, a hallmark of its 60 years of independence, and is working to ensure that its recent diplomatic approach to the United States does not negatively affect its relations with Russia. Thus, when in April 2006 rumours began to spread that the Ayni Air Base shared by Russia and India – also called Farkhor – in Tajikistan was operational, concern in Pakistan and the West increased. However, the Indian government strove to show that this was a reflection of Indian diplomacy's formal interest in Central Asia since 2003, aiming to contribute to security in Afghanistan and to participate in the sharing of energy. More than half of India's foreign aid is destined to Afghanistan: 430 million euros in 2006. The pragmatic attitude of Indian authorities in Asia was also confirmed when it approached the military government of Myanmar, a country that is rich in natural gas, in an attempt to convince Bangladesh in 2005 to build a gas pipeline that would allow them both to benefit from this resource.

It is worth recalling that in the middle of the 1990s Unocal considered the possibility of a gas pipeline between Turkmenistan and Pakistan crossing Afghanistan, when the stability imposed by the Taliban after 1996 made the project viable in terms of security. Unocal's strategy in the region collapsed in 1998 when the US attacked Al Qaeda bases in Afghanistan after the terrorist attacks against its embassies in Kenya and Tanzania. In December 2002, after the overthrow of the Taliban regime, the presidents of Turkmenistan, Afghanistan and Pakistan signed an agreement to build this gas pipeline, with a length of 1,600 kilometers, an estimated cost of 3,500 million dollars and the capacity to transport 30,000 million cubic metres of gas a year from 2006. The agreement was reached thanks to negotiations that started in 2002 with the Afghan President Hamid Karzai, a former adviser to Unocal. After signing the agreement, the three countries invited India to join them, taking advantage of a new climate in relations between New Delhi and Islamabad. At the end of 2003, the Asian Development Bank (ADB) considered the proposal viable, and branded it a project of regional interest provided it also supplied the eager Indian market. The green light

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from the ADB led to the tender process and the execution of the project. However, Afghanistan's instability, and to a lesser extent unrest in Pakistan, has prevented the project from getting off the ground. Thus, it is evident that in the short term the project will not serve to satisfy India's energy needs.

In its attempts to integrate itself within possible initiatives that connect Central Asia with the Indian subcontinent, New Delhi has received the support of Washington – which sees India's presence as a counterweight to Russia and China within the region –, except in those cases involving Iran. In fact, the progressive rapprochement of Prime Minister Singh with Washington has led him to support the second gas pipeline project and marginalise the former, a decision that was rejected in May 2006 by the Communist Party, which is part of the Left Front that governs in coalition with the Congress Party. Pakistan is present in both projects (it is the third Asian economy in terms of growth after China and India), and is exploring with interest the possibility of building a pipeline with Iran, although in the current situation this seems unlikely.

Traditionally relations between India and Iran have been strategic, given their mutual dependence within the oil sector. However, after February 2, 2006, when India voted for the first time in line with the US and the European Union in favour of a tough resolution in the Board of Governors of the International Atomic Energy Agency (IAEA) to bring Iran before the Security Council due to its nuclear program, relations between New Delhi and Tehran have changed. Additionally, India supports the anti-missile shield project designed by the US Administration, distancing itself even further from Iran, while also possibly straining its relations with China. It is worth recalling that between 1989 and 2006, the US sanctioned Indian companies or citizens at least half a dozen times because they transferred nuclear or chemical technology to Iran. On the other hand, the visit to India by President Bush in March 2006 marked the signing of the cooperation agreement between both countries related to the civilian nuclear sector, first broached in a joint statement of July 18, 2005, which will mean that India in the future will be less dependent on its crude suppliers. At the end of July 2007, and after completing various stages, both governments unveiled the final agreement, which was published on August 3, and includes the possibility of selling to India nuclear reactors and fuel, which are running out. Pending authorisation from the IAEA – with which India is currently negotiating the inspection of its 14 civil reactors, leaving aside its eight military reactors – and the Nuclear Suppliers Group, this agreement has already opened the door to other potential partners for India within the nuclear energy sector: on January 25, 2007, Vladimir Putin visited the country and signed an agreement to help in the construction of four nuclear reactors, to which must be added the two being built at the Kudankulam

plant; on August 14 of the same year, the Australian government ended its prohibition regarding uranium sales to India; and on January 25, 2008 Nicolas Sarkozy, during an official visit, offered the collaboration of the French nuclear sector. All these countries are responding quickly to India's needs, for which its government has already assigned a budget of 10,000 million dollars, to be invested by 2020. This will be employed in the construction of nine further plants – India aspires to produce 25 per cent of the electricity that it consumes –, even though at the same time it still needs to import hydrocarbons in order to maintain an annual growth rate of 9 per cent. This is the why, during the visit by Putin, Russian-Indian cooperation was invigorated, while Rosneft and the India Oil and Natural Gas Corporation agreed to carry out joint projects in Russia, India and third countries, including the creation of joint ventures for exploration, production, transport and export of oil and gas.

As mentioned in relation to PetroChina in China, it is significant that the company with the highest market capitalisation in India is Reliance Industries, with a value on the Stock Exchange of 80,000 million dollars in the autumn of 2007, and many interests within the energy sector. The company manages, amongst other activities, the world's third largest refinery. Additionally, the industrial consortium Tata Motors in March 2008 obtained a credit line of 1,910 million euros to finance the acquisition of Ford's British subsidiaries, Jaguar and Land Rover. While it floods its growing modern road network with SUVs, India must continue to quench its thirst for oil during the years to come.