Oil Market in China: Current Situation and Future Prospects
- Increasing crude oil imports from the Middle East and changing market environments after joining the WTO -

Dr. Ken Koyama
General Manager
Energy Strategy Department
The Institute of Energy Economics, Japan

<Objectives of the study>
With significant increases in oil demand and imports triggered by vigorous economic growth, China has grown to become an important player affecting the international oil market. Furthermore, since joining the WTO at the end of 2001, China has implemented various reforms of regulations and systems concerning the oil market. As a result, conspicuous changes have occurred in competitive and market environments in China, attracting greater attention from international oil/energy industries. In recognition of this situation, this study analyzes recent trends in and conditions of the supply and demand situation, market systems, policies and major players in the Chinese oil market, and effectively utilizes the findings to interpret future prospects\(^1\).

<Major conclusions>
1. In 2001, crude oil imports to China declined by 10 million tons from the previous year, to 60.26 million tons (approximately 1.2 million barrels/day), due to declining oil demand, slight increases in domestic crude oil production, the high level of domestic inventories, and other factors. However, crude oil imports from the Middle East remained at the same level as in the previous year, at 33.86 million tons (56% of the total). In addition, the Middle East sour crude oil became the major supply source, as the largest crude oil supplier was Iran, followed by Saudi Arabia.

2. Although sluggish in 2001, crude oil imports, particularly those from the Middle East, are bound to increase significantly in the mid-to-long term. Thus, the important challenges for

---
\(^1\) This paper is a report on studies commissioned to IEEJ by the Agency of Natural Resources and Energy, Ministry of Economy, Trade and Industry in 2001. With the permission of the Ministry, this paper has been made available to the general public. The author is grateful for the understanding and cooperation of those concerned in the Ministry.
China are securing stable crude oil imports, upgrading and expanding refinery facilities to effectively process crude oil imported from the Middle East, and improving the relevant import-supporting logistics. The Chinese government has actively developed and implemented policies for securing stable supplies of oil, such as reinforcing relationships with major oil producers in the Middle Eastern countries and Russia and trying to establish strategic oil stockpile systems. In addition, Chinese oil companies are working aggressively on advancements into overseas upstream sectors, investments in the upgrading/expansion of refinery facilities, improvements of port/berths facilities, and the like, to boost acceptance capabilities for increased crude oil imports.

3. Since joining the WTO, China has implemented major market reforms including a reduction in tariffs for oil markets, permission for non-state crude oil imports (8.28 million tons for 2002), and the establishment of petroleum product import quota (22 million tons for 2002). Further liberalizations are scheduled, including the elimination of petroleum product import quota (2004) and the liberalization of retail (2005) and wholesale markets (2007).

4. Under these circumstances, competition among major players, primarily led by the Chinese oil companies (CNPC and SINOPEC) is intensifying to secure the growing market. Oil majors and companies in oil producing countries are working aggressively to enhance accesses to the Chinese market through the IPO of Chinese companies on overseas stock exchanges, strategic alliances, participation in large-scale projects, and the like.

5. The future direction of China will be a crucial factor affecting the conditions surrounding the international oil market. While China has embarked on various measures to secure oil supplies, it will be important for Japan to implement feasible cooperation activities in consideration of our advantages in terms of cost effectiveness, expertise, human resources, and the like, to prevent China from becoming an unstable factor in the international oil market.

6. Japanese energy enterprises should regard expansion and opening up of the Chinese oil/energy markets as major business opportunities. These markets are by no means easy to access or handle, and Japanese firms seem to be lagging behind slightly compared with their overseas counterparts. It is thus crucial to approach these markets in careful consideration of Chinese needs, Japanese advantages in terms of technologies and existing resources, with the idea of optimization of logistics in the entire East Asian region (to minimize costs), in mind.
1. Energy supply and demand

Primary energy consumption in China continued to decline, from 913 million tons of oil equivalent (hereinafter referred to as “TOE”) in 1996 to 787 million TOE in 1999, due to declining consumption of its primary source, i.e., domestic coal. However, as downward trend in coal consumption has recently bottomed out, and as consumption of petroleum and natural gas has been increasing steadily, consumption of primary energy as a whole is expected to increase steadily in concurrence with economic development of the country. The Chinese government forecasts in the tenth five-year plan (2001-2005) that primary energy consumption will increase at an average annual rate of approximately 3-4%. The International Energy Agency (IEA), Energy Information Administration (EIA) of the U.S., and other organizations expect energy consumption in China to steadily increase at an annual rate of approximately 3% for the next ten to twenty years.

While coal consumption has recently been sluggish, oil/natural gas consumption is increasing steadily. The energy-consumption structure in China is undergoing major changes, with the share of coal plummeting (from 77.8% in 1990 to 62.0% in 2001) and those of oil and gas increasing (from 16.1% to 27.6% and from 1.9% to 3.0%, respectively, during the same period). Total energy consumption is expected to increase, but the departure from coal in the energy-consumption structure is also expected to continue.

These trends in demand cannot be adequately covered by domestic production, particularly in the case of oil, leading to an inevitable increase in imports. In 2001, imported crude oil declined to 60.26 million tons due to the large increase in domestic stocks and the temporary decline in demand; it is destined to rebound, however. Specifically, crude oil imports from the Middle East will certainly increase significantly. In addition, natural gas, which has thus far been supplied domestically, will be imported as domestic production fails to catch up its demand growth. Subsequently, China should properly handle the increasing energy demands, which will expand the gap between the demand and supply of energy and increase imports, in conjunction with its economic growth.

2. Oil supply and demand

Oil consumption in China has steadily increased, from 2.25 million B/D in 1990 to 4.88 million B/D in 2001, at an average annual rate of 7.3%, in conjunction with the economic

---

growth, income growth, and motorization of the society\textsuperscript{3}. The demand increase has been led specifically by gasoline and diesel oil, the annual consumption of which were 35.48 million tons (23\% of the total consumptions of the four major petroleum products) and 74.07 million tons (48\% of the same), respectively, as of 2001.

By region, the major consumption areas are the southern coastal areas such as the Guangdong, Zhejiang, and Fujian Provinces, the Eastern region including Beijing and other major cities and the central/southern areas. The total consumption of gasoline, kerosene, and diesel oil in these areas in 2000 was 81.46 million tons, accounting for 74\% of the total national consumption.

While oil consumption almost leveled off in 2001 due to slow down in economic growth rates and other relevant factors, it is regarded as a temporary phenomenon. The consumption is generally expected to rebound with a recovery in economic performance. Although the major prospects (of the IEA, EIA, China Energy Resource Institute, and the like) feature various growth rates, their findings are congruent with significant demand increases in the future\textsuperscript{4}.

On the other hand, domestic production of crude oil in China in 2001 amounted to 165 million tons, an increase of 1.9\% over the previous year. Since 1991, crude oil production increases have remained quite modest, at an average annual increase rate of 1.6\%. This is primarily due to the fact that the maturity of major onshore oil fields (Daqing, Shengli, etc.), which account for 60-70\% of the entire national production, has negative effects in terms of production increase. Steady crude oil production increases at western inland oil fields in the Tarim Basin and other locations, as well as at offshore fields, are set off by sluggish output at the existing major fields. The current state, in which production is increasing at western and offshore fields but leveling off or declining at eastern onshore fields, is expected to continue, with the projected crude oil output as a whole leveling off or slightly increasing, at 170-180 million tons annually.

To respond to these demand trends, China has greatly increased oil imports, particularly in the case of crude oil, which rose by 92\% over the previous year, to 70.27 million tons, in

\textsuperscript{3} The data is based on IEA statistics such as those in the Oil Market Report and the like. The figure for 1990 does not include those for Hong Kong.

2000. In 2001, however, crude oil imports decreased by nearly 10 million tons, to 60.26 million tons, due to counteraction against the major increase of the previous year, restraints derived from significant increase in domestic oil inventory, stagnant domestic demand and a slight increase in domestic crude oil production. However, in and after 2002, crude oil imports are expected to pick up and continue the increasing trend under the conditions of the general demand and domestic production trends discussed above.

Amongst the general expansion of crude oil imports, those from the Middle East are increasing at a particularly rapid rate. Even in 2001, when total crude oil imports declined, those from the Middle East totaled 33.86 million tons, which was almost the same level as in the previous year (56.2% of total crude oil imports). What is noteworthy is high-sulfur crude oil is now largely imported from the Middle East, even though it was formerly difficult to refine in Chinese refineries. In 2001, the largest exporting country to China was Iran (import volume of 10.85 million tons), followed by Saudi Arabia (8.78 million tons). This trend is expected to continue, and as crude oil imports increase, the importance of the Middle East as a (high sulfur) crude oil supply source will be further heightened.

As for the refinery business, while the combined domestic refinery capacity of CNPC and SINOPEC in 2001 was 243 million tons, the actual refining throughput was 194 million tons, and the average capacity utilization ratio at refineries was 80%. The capacity utilization ratio is gradually improving as inefficient small refineries are closed, petroleum companies make rationalization efforts, regulations are imposed on petroleum product imports, and other such measures are taken. As specified above, imports of Middle Eastern high-sulfur crude oil are increasing, and investments in secondary facilities (such as desulfurization units) and upgrading of the refineries have therefore become important issues. At present, capital investments are being made to refine the increasing amount of Middle East crude oil at major refineries in the coastal area, such as Maoming in Guangdong Province and Zhenhai in Zhejiang Province.

In 2001, petroleum product imports (excluding LPG) reached 21.45 million tons, an increase of 18.9% over the previous year, which played a role in the domestic supply and demand balances. Although the volume of imported products greatly increased in the latter half of the 1990s, imports have been restricted since 1998 in order to protect major domestic oil companies such as CNPC and SINOPEC. Subsequently, imports of gasoline and diesel oil have been basically prohibited. Imports have thus been primarily comprised of heavy fuel oil by state-sector firms, based on the import quota system. However, China joined the WTO
in December 2001, and is determined to introduce step-by-step liberalization of imports of petroleum products. In 2002, there will be an import quota of 22 million tons of petroleum products, of which 4.6 million tons are to be imported by the non-state sector.

No official statistics are kept of the oil inventory in China. In 2000, as crude oil imports greatly increased, domestic oil inventories significantly accumulated due to problematic price mechanism for domestic oil market, as explained later, the excessively high inventories became serious problems for the petroleum industry. It has been reported that, in and after 2001, certain measures have been taken to resolve the problem, but fundamental solutions have not been realized, partly due to the slow down in domestic petroleum demand. According to the interview survey for this research project, Chinese oil inventory as of the end of 2001 were estimated at 12.3 million tons of crude oil and 11.7 million tons of petroleum products, which could satisfy domestic consumption for slightly less than 40 days.

3. Crude oil and petroleum products procurement and distribution in the domestic market

There are basically two sources for the supply of crude oil to domestic refineries: domestically produced crude oil and imported crude oil. CNPC supplies crude oil to its own refinery system and SINOPEC (as well as to overseas customers), as its production of crude oil exceeds the amount required to its refinery needs. On the other hand, SINOPEC, which produces less crude oil than that required for its refinery system, depends on crude oil supplied by CNPC and CNOOC, as well as on imports. Consequently, China has flows of domestically produced crude oil from the Northeastern region, where major oil fields (mainly held by CNPC) exist, as well as from offshore oil fields (mainly held by CNOOC), to the southern coastal area through facilities such as major crude oil pipelines, railroads, and tankers. Prices of domestically produced crude oil are currently determined in relation to the FOB prices of benchmark crude oil, such as Indonesian crude oil, coupled with some expenses, in accordance with the price reform implemented in 1998.

As the imbalance between supply and demand intensifies, the importance of imported crude oil is increasing as a supply option. Its procurement is based on international market prices and is primarily conducted by a refinery in the southern coastal area (SINOPEC). To respond effectively to the increasing imports of crude oil from the Middle East, and to reduce import costs, infrastructure improvements are emphasized primarily in large-scale coastal refineries for the expansion and upgrading of refining facilities and the build up of
infrastructure to receive large tankers.

Actual imports have thus far been conducted exclusively by four state-owned companies: SINOCHEN, UNIPEC (a joint venture between SINOPEC and SINOCHEN), CHINA OIL (a joint venture of CNPC and SINOCHEN), and ZHUHAI ZHENRON. However, because China is now a member of the WTO, imports amounting to 8.28 million tons will be allowed in “private-sector trades,” in addition to those conducted by the four companies. As for forms of import, imports from Middle Eastern oil-producing countries by term contracts and imports of crude oil developed by Chinese petroleum companies overseas are now increasing, but spot procurments seem to account for the majority.

Oil product distribution channels are the followings. Oil products supplied from the refinery sections of CNPC and SINOPEC, (along with imported products) are distributed through sales companies on the regional and provincial levels and final retail units to end users. For strategic and special important users (such as railroads, airlines, and military customers), direct sales bypassing the above channels are conducted.

The domestic prices of petroleum products were first reviewed and reformed in 1998, and were determined through the use of a system in which the benchmark price is established based on product prices in the Singapore market, and is adjusted monthly to reflect price fluctuations in the market. However, under this system, speculative actions became rampant with expectation of the price movements in the Singapore market, making it difficult to maintain the order and the stabilization of the domestic market. Thus, the pricing system was modified in October 2001. Currently, (1) the prices should refer to the monthly average product prices in the three major markets (Singapore, Rotterdam, and New York); (2) when the reference prices fluctuate beyond a “certain range (not specified),” the domestic benchmark prices should be modified; and (3) CNPC, SINOPEC, and the like should set their retail prices within the range of 8% of the benchmark prices (both upper and lower).

As China has joined the WTO, the domestic petroleum product market is scheduled to gradually eliminate tariff barriers and open up the retail market (by 2005) and wholesale market (by 2007), in addition to liberalizing imported products, as previously mentioned. As the Chinese petroleum market expands, competition among major domestic companies such as CNPC and SINOPEC, as well as with foreign companies, including major oil companies, are expected to intensify. In particular, in the southern coastal market in which demand is conspicuously increasing, competition among major players is expected to be
quite severe. Under these circumstances, enhancement of the oil product supply bases to the southern coastal areas, and improvement and build up of retail networks for securing market shares are major issues to be tackled by these companies.

4. Quality of petroleum products
Quality standards for the gasoline and diesel oil prevalent in the Chinese market are quite lenient compared with those in industrialized countries. Chinese standards specify that the sulfur and benzene contents of gasoline must be no more than 0.08% and 2.5%, respectively, and that the sulfur content of diesel oil must be no more than 0.2% and its minimum cetane number should be 45. The specifications for gasoline, for example, are almost equivalent to the standards introduced in 1993 in Europe (Euro-1).

Increasing demands are expected with the advancement of motorization in the country; air pollution is expected to cause more serious problems, and environmental protection should be regarded as a more serious concern if the Beijing Olympics are to be successful. Under these circumstances, China has made more strenuous efforts to enhance its quality standards for petroleum products. Some large cities, including Beijing, have already introduced stricter quality standards5. To be specific, current plans aim for a reduction in the sulfur content of gasoline to 0.015% by 2009, and the sulfur content of diesel oil to 0.035% by 2008 in Beijing only. However, as Europe and Japan are also planning to introduce stricter quality standards 6, the gap between China and these countries in terms of quality standards is expected to remain.

Chinese petroleum companies will be required to make large capital investments in the upgrading of refinery facilities and construction of secondary facilities, to meet stricter quality standards. To respond to these requirements, there are important issues to be properly handled: (1) imports of high-sulfur crude oil from the Middle East, as a supply source, are expected to increase, (2) the burden of making capital investments is quite likely to become heavier, and (3) it will not be easy to recover the costs of large-scale capital investments due to inevitably intensified competition caused by liberalization of the domestic oil market.

---

5 In July 2001, a regulation was introduced to restrict the olefin content of gasoline to 35% or less in Beijing, Shanghai, and Guangzhou. This regulation is scheduled to be implemented nationwide in 2003.
6 For example, the EU is planning to reduce the maximum sulfur content of gasoline to 0.001%, and that of diesel oil to 0.005%.
5. Energy and oil policies

The energy policies of China are established in the form of a comprehensive basic policy and targets for major industries in each five-year plan, and are implemented accordingly. However, unlike the former state-planned economy, recent five-year plans and targets are no longer forcible instructions or controls over strict numerical targets, but “guidelines” specifying directions or goals to be attained as a nation.

In the current 10th five-year plan (2001-2005), the major targets of the energy policies are as follows.

(1) Enhancing energy supply security
(2) Upgrading the energy supply-demand structure
(3) Promoting energy conservation
(4) Promoting development of the western region
(5) Enhancing environmental protections

Under these circumstances, the two most important actions or policies for the petroleum industry are: (1) how to respond to oil supply security concerns based on the expected increasing dependency on imported oil; (2) reforms of the petroleum industry in conjunction with the joining of the WTO. The Chinese government thus considers the following to be priority targets of its oil policies.

(1) Actions for oil supply security
(a) Promotion of domestic crude oil production (domestic crude oil production targeted at 170 million tons in 2005)
(b) Advancement to overseas upstream investment (overseas equity crude oil production targeted at 15-25 million tons in 2005)\(^7\)
(c) Enhancement of relationships with oil producing countries to secure imports and diversify import sources (enhanced relationships with major Middle Eastern countries, Russia, central Asian countries, etc.)
(d) Creation of strategic oil stockpile system (creating oil stockpile capability of eight million cubic meters by 2005)

(2) Reforms of the petroleum industry/market

\(^7\) As for advancements to overseas upstream investment by Chinese petroleum companies, strategic priority areas (Russia, Central Asia, Iran, Sudan, Indonesia, etc.) have already been selected in consideration of regional proximity, political relationship, advancements of European/American oil majors, quality of the relevant crude oil, and the like.
(a) Promotion of the realignment and rationalization of state-owned oil companies
   (enhanced cost competitiveness through the restructuring and improvement of efficiency, introduction of advanced technology and capital strength through the strategic alliances with oil majors, etc.)

(b) Step by step deregulation and liberalization of the domestic oil market (gradual elimination of tariffs, expansion and liberalization of oil import quotas, opening up of wholesale and retail markets, rationalization of domestic pricing systems, etc.)

6. Financial and operational trends and targets of the oil industry

In 2001, the overall profit level of the Chinese petroleum industry declined due to reduced crude oil prices, intensifying competition in the domestic oil market, and other factors. Corporate profit results for 2001 are 53 billion Yuan for CNPC (a decrease of 11.6% from the previous year)(46.8 billion Yuan for PetroChina (a decrease of 15%), 17.3 billion Yuan for SINOPEC (a decrease of 21%), and 8 billion Yuan for CNOOC (a 23% decline). In terms of operational indices such as crude oil production, refining capacity and refinery throughput, Chinese oil companies are global scale. But they are still lagging behind international oil companies, including the oil majors, in terms of cost competitiveness (crude oil production costs, refining costs, etc.), technology, overall management efficiency, and the like. It is therefore a prerequisite to press forward with rationalization and cost reductions, and to tackle priority issues for improving profitability, so that the companies can succeed and survive amidst the expected intensification in competition. The following are major priority issues and targets to be handled by each company.

(1) CNPC

(a) Stabilization of and increase in domestic crude oil production (at major oil fields at Daqing, etc.) (2005 target: 105 million tons)
(b) Increase in the amount of crude oil to be acquired overseas (2005 target: 15 million tons)
(c) Collaboration with Russia on oil-related projects (crude oil pipelines to Beijing or Daqing and joint exploration and development in eastern Siberia)
(d) Enhanced involvements in natural gas projects (promotion of West gas to East project, and natural gas import plans from east Siberia through pipelines)
(e) Penetration into the oil markets in the southern coastal area (enhanced foundations of product supply facilities/bases for the growing markets dominated by SINOPEC)
(f) Enhancement of the retail sector (number of gas stations targeted at 20,950 by 2005; enhanced competitiveness through strategic alliances and joint-venture projects with oil majors)
(2) SINOPEC
(a) Enhancement of the domestic crude oil production (2002 production target: 38 million tons, primarily with increases at western and offshore fields)
(b) Increase in the amount of crude oil to be acquired overseas (Investment in Iran and other countries; 2005 target: 2-3 million tons)
(c) Enhancement and upgrading of refinery facilities and improvement of logistics to adequately respond to the refinery requirements of increased crude oil imports from the Middle East
(d) Reduction and rationalization of refinery and distribution costs
(e) Enhancement of competitiveness and maintenance/expansion of market shares, particularly in the southern coastal area (stronghold of SINOPEC)
(f) Enhancement of the retail sector (number of gas stations targeted at 30,000; enhanced competitive edge through strategic alliances and joint ventures with oil majors, etc.)

(3) CNOOC
(a) Expansion of domestic crude oil production (offshore oil field production targeted at 40 million tons by 2005)
(b) Increase in the amount of crude oil to be acquired overseas (Investment in Indonesia and other countries; 2005 target: 6 million tons)
(c) Enhanced operations in natural gas projects (offshore natural gas field production targeted at 20 billion cubic meters by 2005; development of LNG projects, including the Guangdong LNG Project)

7. Involvement of overseas players, including oil majors, in the Chinese market
Major players in the international energy market (such as oil majors, Middle Eastern oil producing countries, and Russia) have recently become more heavily involved in the Chinese energy market. This is due to the fact that: (1) energy demand in China, primarily that for petroleum and natural gas, is expected to grow significantly and continuously; (2) the Chinese energy market is expected to be more opened up and liberalized, with its newly acquired membership in the WTO as a turning point; and (3) China is seeking to enhance its access to advanced technologies, capital, overseas energy resources. Foreign investors regard entry into the Chinese market as a strategically important issue. The following are examples of the involvement of the oil majors, Middle East oil producers, and Russia in the Chinese market.
(1) Oil majors

(A) ExxonMobil
(a) Investing one billion dollars in the IPO of SINOPEC
(b) Expanding Guangzhou Refinery and Petrochemical Plant in Guangdong Province
(c) Creating a joint venture fuel sales plan for Guangdong Province (joint venture of 500 service stations)
(d) Studying the upgrading and expansion of Fujian Refinery and construction of a large petrochemical plant in Fujian Province in cooperation with Saudi-ARAMCO (government approval has already been obtained for the petrochemical plant)

(B) RD/Shell
(a) Investing 430 million dollars in the IPO of SINOPEC, and investing 200 million dollars in the IPO of CNOOC
(b) Concluding an agreement on the construction of a petrochemical plant in Huizhou, Guangdong Province
(c) Creating a joint venture fuel sales plan for Jiangsu Province (joint venture of 500 service stations)
(d) Participating in natural gas development at Changbei bloc in Shaanxi Province, and in the construction of a natural gas pipeline to Beijing
(e) Participating in the West gas to East project in cooperation with Gasprom, a Russian firm, and other companies

(C) BP
(a) Investing 620 million dollars in the IPO of CNPC (PetroChina), and investing 400 million dollars in the IPO of SINOPEC
(b) Participating in an LNG project in Guangdong Province
(c) Participating in a petrochemical plant project in Shanghai
(d) Creating a joint venture fuel sales plan for Zhejiang Province (joint venture of 500 service stations through a joint venture)

(2) Middle Eastern oil producing countries
(a) The conclusion of cooperation agreements in the energy field reached through summit diplomacy, such as when President Jiang Zemin visited Saudi Arabia in 1999, President Khatami of Iran visited China in June 2000, and President Jiang Zemin visited Iran in April 2002
(b) The acceptance by Iran and Iraq of Chinese investments in their upstream sectors
   (SINOPEC’s participation in the Kashan oil field in Iran and CNPC’s participation in the
    Al-Ahdab oil field in Iraq)
(c) Significant increases in crude oil sales by Iran, Saudi Arabia, and others (Iranian exports
    in 2001 increased by 55% over the previous year, to 10.85 million tons, and Saudi
    Arabian exports increased by 53%, to 8.78 million tons, in the same year)
(d) Saudi Arabia (Saudi ARAMCO) is developing plans to expand the Fujian Refinery in
    Fujian Province and enter into the retail business in collaboration with ExxonMobil.

(3) Russia
(a) Promotion of collaboration in petroleum and natural gas development through the
    conclusion in 2001 of the China-Russia Good-Neighbor Friendship and Cooperation
    Treaty
(b) Studying the crude oil pipeline project from east Siberia (Angarsk) to Beijing (total
    length: 2,300 km; capacity: 30 million tons; with Yukos, etc. on the Russian side and
    CNPC on the Chinese side)8
(c) Studying the crude oil pipeline project from east Siberia (Angarsk) to Daqing (total
    length: 2,500 km; capacity: 30 million tons; with Yukos, etc. on the Russian side and
    Daqing Oil Company on the Chinese side)
(d) Studying the crude oil pipeline project from east Siberia (Angarsk) to Nakhodka (total
    length: 3,800 km; capacity: 50 million tons; with Transneft on the Russian side)
(e) Studying the natural gas pipeline project from east Siberia (Irkutsk) to Beijing (total
    length: 2,500 km; capacity: 30 billion cubic meters; with Russia Petroleum, etc. on the
    Russian side and CNPC on the Chinese side)
(f) Studying oil/natural gas joint-development projects in east Siberia
(g) Gasprom participating in the West gas to East Project (jointly with Shell, etc.)

8 Oil import logistics in China and East Asian
As oil demand in China greatly increases, the oil market in East Asia (comprised of Japan,
China, Korea, and Taiwan) will also grow to be the largest crude oil import market in the
world. As Japan, Korea, and Taiwan have long imported crude oil primarily from the Middle
East, the relevant import infrastructures and logistics, as well as refinery facilities and
systems, have also been properly structured there. However, in China, facilities capable of

8 In the crude oil pipeline project from East Siberia to China, high priority has now been placed on the
    project to Daqing.
accepting the Middle Eastern crude oil transported in large tankers are currently limited. According to research conducted by China’s Ministry of Transportation, of 44 berths nationwide, only nine are capable of accepting tankers of 100,000 tons or more, including Dalian, Tsingtao, Ningbo, Zhoushan, Huizhou, Maoming.

However, by recognizing the widening gaps in oil supply and demand balance, the resulting great increases in crude oil imports from the Middle East, the necessity of reducing crude oil procurement costs to enhance international competitiveness, China has already embarked on the reinforcement of its import logistics for facilitating the acceptance of Middle Eastern crude oil. At refineries in Zhenhai, Maoming, Gaoqiao, Fujian, and others, investments are made to reinforce and upgrade the facilities for refining the Middle Eastern crude oil. At the same time, plans call for expansion of the capacities of the large berths adjacent to these refineries, and the construction of new large-scale crude oil terminals on the west coast of the Gulf of Bo Hai and the mouth of the Chang Jiang. As imports are expected to increase, plans also call for the improvement of relevant infrastructures, including crude oil storage facilities, transportation pipelines, and the like. Although these improvements will require that China bear a heavy investment burden, they are indispensable for securing stable oil supplies. It is also important to minimize crude oil procurement costs by implementing efficient logistics improvements.

In this manner, logistics improvements will be implemented from the perspective of ensuring the stable, efficient, and cost-effective procurement of imported crude oil (from the Middle East) in the East Asian region as a whole, including China. These efforts may be led by individual enterprises or countries attempting to enhance their competitiveness, but it may be important to focus on optimizing for the entire region, and minimizing costs by utilizing the infrastructures and logistics already existing in East Asian nations.

To address issues concerning oil import logistics, it will be also important to consider the fact that (1) deregulation and market liberalization are in progress in the East Asian oil market as a whole, including China, (2) there are, at present, excess refining capabilities in Japan, Korean, and Taiwan, and (3) petroleum product trades in the East Asian market may be further expanded due to the general trend of market liberalization. Specifically, regarding the means of supplying oil to the southern coastal area of China, which are bound to increase their oil imports due to imbalanced supply and demand caused by rapid economic growth, it will be necessary to develop an optimal supply pattern for crude oil and petroleum products from a regional view point, and to improve logistics in accordance with the pattern.
9. Implications for Japan

Based on recent trends and the future prospects for China’s oil market, its supply and demand status and its relevant policies, as mentioned above, the implications for Japan can be summarized as follows.

(1) Behavior of China and energy security of Japan

With the expected increases in its energy and oil demands, as well as in its oil imports, the importance of China as a factor affecting the supply and demand balance in the international energy market will become greater than ever. In terms of energy supplies, Japan depends primarily on the procurement of energy in the international market. China’s behavior and its impact on the world market will therefore be quite important in considering our energy security issues. In this sense, it is crucial to follow up on information, as well as to continue and enhance analyses, concerning China’s supply and demand conditions and policy trends in the energy markets.

(2) Enhancement of energy security and collaboration with China

As the energy market is globalized, Japan cannot overlook problems regarding China’s energy security and its vulnerability. Basically, Chinese efforts to implement energy security measures are expected to enhance the energy security not only of the country itself, but also of the entire Asian region, as well as the world. However, if China attempts to implement energy security measures in an excessively exclusive manner, political and/or economical tensions may be created with other countries, and thus it may be detrimental to the energy security of Asia and the entire world. In this sense, it will be important for Japan to facilitate a perspective of pursuing common interests, and to involve China in the efforts or framework to stabilize the Asian and global energy markets. Due to Japan’s abundant experience, human resources, and expertise in the development of energy security policies, it will be required to continue to increase its collaborative efforts with China to enhance its energy security.

(3) China’s rise in the international oil market and Japan’s presence

It is inevitable that China will significantly increase its oil imports, specifically crude oil imports. However, the global oil production capabilities led by the Middle East are also expected to expand to meet the increasing demand. It is therefore difficult, for the time being, to anticipate situations in which China’s increasing oil imports will become a factor to directly restrict Japan’s crude oil procurement. However, as the Middle East oil
producers and oil majors become more interested in significant increases in oil demand and imports in China, as well as its market-opening status, Japan’s influence as the largest oil importer in Asia may be relatively lowered in terms of its “presence” in international oil markets.

(4) Optimization in the East Asian oil market
If Japan is to pursue negotiations, dialogues, and the reconstruction of relationships with suppliers in order to maintain and expand its presence in the international oil market, and to secure stable oil supplies at reasonable costs, it should consider, in addition to the conventional measures, the development of initiatives based on the concept of optimization in the entire East Asian region, including China. A good example will be the way to tackle with the so-called the “Asia premium” issue on the crude oil price. As a buyer, it is important for Japan to examine this issue, conduct dialogue with suppliers, and seek countermeasures or solutions. These efforts should not be made alone, however, but through collaboration among East Asian importing countries sharing common interests, such as China, Korea and Taiwan.

(5) Opening of the Chinese market and Japan’s business opportunities
The growing Chinese energy market and its opening up can basically be regarded as presenting major business opportunities for Japan’s energy industry. At present, however, Japanese companies seem to be very cautious to become involved in China’s energy business. This is primarily because of: (A) due to the high priority placed on their efforts to rationalize their own operations and improve efficiency in order to respond to Japan’s domestic deregulation and liberalization; (B) limited financial strength of Japanese energy companies for large-scale investments overseas; (C) the significant risks perceived in investments in China, etc. However, in order to increase profits and survival and growth in the future, it will be quite important for Japanese energy companies to consider the possibility to develop energy business in China by making best use of the effective utilization of the infrastructures and supply facilities already existing in Japan’s energy enterprises, and of the fields in which Japanese companies hold relatively high technological levels and comparative advantages (energy-saving technologies, clean coal technologies, etc.).

(6) Oil market in the southern coastal area and Japan’s business opportunities
In terms of oil markets, it will be necessary to enhance access to the southern coastal area of China, which is expected to greatly increase its oil demand and imports. To this end, first of all, it is vital to establish and implement business strategies based on a thorough
understanding of the needs and circumstances on the Chinese side. Additionally, in the immediate future, for steady advancement into the southern coastal area of China, it will be important to pay attention to the activities of important players such as CNPC to find opportunity of business cooperation, as the company is now working hard to expand business in southern area and thus to enhance supply capability and logistics for the growing market there. In any event, Japanese firms should effectively utilize their existing infrastructures for oil supply (refining capabilities, crude oil/product terminals, storage facilities, etc.), while monitoring supply and demand and market trends in the southern coastal area of China.

Contact: info-ieej@tky.ieej.or.jp