

International Energy Market's Gravity Center Shifting to Asia

Ken Koyama, PhD
Chief Economist, Managing Director
The Institute of Energy Economics, Japan

Since the beginning of 2018, crude oil prices showed a continued trend for rising. In May, particularly, the benchmark Brent crude oil price temporarily rose beyond \$80 per barrel for the first time since November 2014. The oil market has reached a turning point, attracting global attention. Frequently cited as major factors behind the oil price hike are the United States' withdrawal from the Iran nuclear deal and subsequently growing geopolitical risks. A potential decline in Iranian crude oil exports under the resumption of economic sanctions following the U.S. withdrawal from the nuclear deal, falling production in major oil producing countries such as Venezuela and other matters of concern on the supply side are frequently felt as major factors behind the oil price hike.

However, basic factors behind the tightening supply-demand balance and price hike include robust demand growth as well as supply-side factors. Global oil demand is posting a robust year-on-year increase of 1.4-1.5 million barrels per day, supported by economic growth and driven by demand expansion in non-OECD countries. The robust demand expansion is supporting the oil price hike. It may be needless to say that the demand expansion concentrates in China, India, Southeast Asia and other Asian emerging economies among non-OECD economies. This is the same case with non-oil energy sources. Typically, China's rapid natural gas demand expansion and its growing liquefied natural gas (LNG) procurement last winter tightened the LNG supply-demand balance, leading to a rapid hike in spot LNG prices. Asian emerging countries' energy demand is exerting great influence on the international energy market.

In 1971, Asia accounted for 14% of global GDP. Japan's share was 10%, indicating that Asian emerging countries' share was very small. In 2015, however, Asia accounted for 30% of global GDP, outdoing the United States or Europe. From 1971 to 2015, Japan's share dropped to 8%, with Asian emerging countries' share rising to 22% in a dramatic expansion. In line with its economic growth presence, Asia's share of global primary energy consumption expanded substantially from 15% (including 6 points for Japan) in 1971 to 42% (including 3 points for Japan) in 2016. Asia has thus become a leading energy consumer in the world energy market. The largest energy consumer in 2016 was China, followed by the United States, Russia, India and Japan. The top five energy consumers included three Asian countries.

Asian energy consumption has increased faster than local energy production, resulting in a substantial increase in Asian energy imports. The trend has been remarkable in oil and gas that comprise the center of global energy trade. In the mid-1980s, Asia depended on imports for less than 50% of its oil supply and was self-sufficient in gas. In 2016, however, Asia depended on imports of 75% of its oil supply and for 20% of its gas supply.

IEEJ Outlook 2018, a long-term energy outlook of the Institute of Energy Economics, Japan, indicates that the gravity center of the international energy market would shift further to Asia towards 2050. The Reference Scenario in the outlook envisages that Asia would account for 3.9 billion tons of oil equivalent or 63% of global primary energy demand growth at 6.1 Btoe or 45% from 2015 to 2050. Growth in China, India and the Association of Southeast Asian Nations would total 3.7 Btoe dominating the Asian growth. Energy demand growth would thus remarkably concentrate in the three among Asian emerging economies. Asia as a whole and each of the three emerging economies would further increase their dependence on energy imports centering on oil and gas, leading energy security challenges to grow even more important for them.

Asia's energy supply and demand structure indicates that coal was the largest energy source in the region in 2016. Coal commanded 49% of regional primary energy consumption, followed by 28% for oil and 12% for gas. Non-fossil energy sources' share was 11%. Compared with coal's share of 28% and gas's share of 24% in global primary energy consumption, the Asian share was far higher for coal and lower for gas. While using cheap, abundant coal endowed in Asia is economically efficient and effective for energy security for the region, its heavy dependence on coal is the most important factor behind regional environmental problems. In this sense, it is a key challenge for Asia to reduce its dependence on coal and promote environmental measures for addressing climate change and air pollution. Asia thus has great room to expand gas and non-fossil energy consumption.

There is another important point in considering the Asian energy market over a long term. That is a shift of the gravity center within the Asia energy market. At present, China is and continues to be the world's largest energy consumer so that energy demand growth, import trends, energy and environmental policies and energy mix changes in China can exert great influence on the international energy market. Chinese energy trends are an important matter of interest to other energy consumers and suppliers, all energy market players and energy policy stakeholders. Depending on future energy demand expansion, China may grow even more important.

However, the IEEJ outlook's Reference Scenario indicates that Chinese energy demand would gradually decelerate its growth and peak out in the 2040s due to slowing economic growth, falling population and aging population. In a scenario where energy conservation would make more progress than in the Reference Scenario, Chinese energy demand may peak earlier. Meanwhile, India and ASEAN are projected to sustain economic and energy demand growth longer than China. Indian and ASEAN energy demand growth over 20 years from 2030 is projected to total about 1.5 Btoe, five times as much as about 0.3 Btoe for China. While the gravity center of the international energy market will shift to Asia, the gravity center of the Asian market will gradually shift to India and ASEAN.

It will grow more important for energy stakeholders in the world to recognize Asia's importance, accurately analyze Chinese trends and grasp Indian and ASEAN trends in view of their growing importance over a long term in considering global energy security and environmental problems influenced by energy consumption and import trends.