

## **Lower China and India Growth Scenario and Implications for International Energy Situation**

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Conventional wisdom tends to indicate that the center of gravity of the international energy market will shift to Asia in line with economic growth and development in Asian emerging countries including China and India. While industrial economies slumped after the Lehman Shock, China and India maintained high growth serving as the driver of world economic and energy demand growth. In this sense, it is no exaggeration that the two countries have persistently increased their presence in the world since 2008. In their long-term energy market outlooks, the International Energy Agency, the Organization of the Petroleum Exporting Countries and the U.S. Energy Information Administration agree that energy demand growth in China and India will be the largest factor behind global energy demand expansion.

On October 22, the Institute of Energy Economics, Japan, released the Asia/World Energy Outlook 2014. The outlook provides the Reference Scenario (for the continuation of present global trends for energy policies and technologies) where the average annual gross domestic product growth between 2012 and 2040 is assumed at 5.4% for China and 6.2% for India, against the global average of 3.0%. Under the GDP growth assumption, global primary energy demand will increase by 44% from 13.4 billion tons of oil equivalent (Btoe) in 2012 to 19.3 Btoe in 2040. Of the global increase at 5.9 Btoe over the period, China and India will account for 2.6 Btoe or nearly a half. The combined increase in China and India is equivalent to the present combined U.S. and Japanese energy consumption, indicating how large the influence of China and India is on future global energy demand.

But the two countries' large share of global energy demand growth means that unexpected changes in their future demand growth could have great impacts on global energy supply and demand as well as on markets. In this respect, possible lower growth in the two countries (particularly China) and its potential impacts on energy markets are attracting attention. This is because downside risks for the Chinese economy have become a matter of concern due to the Chinese growth rate's deceleration from more than 10% to the recent levels below 8%, shadow banking and housing bubble problems, and social and economic inequalities. Given such situation, the outlook gives a lower economic growth scenario assuming the average annual GDP growth rate

through 2040 at 3.9% for China and 5.3% for India. It also analyzes the Lower Growth and Reform Scenario where the two countries will promote a shift to advanced, services-oriented economies (which will have a positive impacts on employment issues) and low-carbon measures regarding energy supply and demand even under lower growth.

As a result, energy demand growth in China and India could decline remarkably. In the Lower Growth and Reform Scenario, the two countries' combined energy consumption will increase from 3.7 Btoe in 2012 to 4.5 Btoe (against 6.3 Btoe in the Reference Scenario) in 2040, with the growth through 2012 being some 70% less than in the Reference Scenario. Particularly, China's energy consumption will peak out around 2020 and decline gradually later. Coal demand, which accounts for a great share of the two countries' energy demand, will post far slower growth than in the Reference Scenario. In the Lower Growth and Reform Scenario, their coal consumption in 2040 will be less than in 2012. Growth will also be reduced remarkably in demand for other fossil fuels including oil and natural gas.

Naturally, the slower demand growth will largely and structurally affect energy supply and demand in China and India. Given that the two countries are expected to grow more dependent on energy imports covering a gap between domestic production and demand due to future demand growth, any decline in their demand growth will hold down their dependence on energy imports, contributing to their energy security. Since coal sees the largest demand growth decline among energy sources, the Lower Growth and Reform Scenario is significant for the two countries' reduction of greenhouse gas emissions, air pollution and overall environmental load. In this way, the scenario indicates that progress in structural reform of the economy, and energy supply and demand under lower growth will allow the two countries to maintain employment even under slower growth and improve the quality of economic growth while benefitting from positive effects regarding energy and environmental problems.

But lower economic growth in China and India will exert great impacts not only on the two countries but also on the whole of the world. Lower growth in the two countries as the driver of global economic growth will have negative impacts on the world economy. Particularly, negative impacts will be greater on net oil and gas exporters that depend heavily on exports to the two countries, including Middle Eastern oil producing countries and former Soviet republics such as Russia. If net oil exporters reduce exports in a manner to share the decline in the two countries' demand growth in the Slower Growth and Reform Scenario, the Middle East's net oil exports in 2040 may be 2.5 million barrels per day less than in the Reference Scenario. If the Middle East alone serves as a swing supplier to adjust supply in response to the demand growth fall, with other net oil exporters doing nothing particular, the region's net oil exports will be 6.9 million bpd less than in the Reference Scenario. As for natural gas exports, a negative impact will be particularly large on the former Soviet Union (including Russia). This point is significant because Russia is deepening cooperation with China due to the tense Ukraine situation and Western economic sanctions.

As a matter of course, the energy demand growth decline in China and India will have not only such negative impacts but also positive impacts on energy consuming countries as the demand growth drop eases the international energy supply-demand balance to lower oil, gas and coal prices. A substantial decline in global GHG emissions through a substantial drop in growth in demand for energy including coal in China and India will make great positive contributions to solving the climate change problem. In this way, the future energy situation for China and India will exert complicated and large impacts on the world. It will be very important to figure out these impacts. In the future, global interests will grow in the two countries' medium to long-term economic growth as indicated by the present situation.

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