

Significance of the Potential Medium-term Oil Supply Expansion

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While benchmark crude oil prices have remained high, above \$100/barrel since 2011, interesting developments have emerged on the oil supply side in the world. These developments in major countries indicate a substantial increase in global oil supply over a medium term through around 2020.

The first development is expanding U.S. shale oil production. Major shale oil production areas including Bakken and Eagle Ford have continued to expand output, prompting relevant organizations to revise upward their shale oil output projections through around 2020. Among them, the International Energy Agency in its World Energy Outlook for 2013 forecasts shale oil output in 2020 at nearly 4 million barrels per day, almost 30% more than estimated in its outlook published in 2012. On December 16, the U.S. Energy Information Administration gave an early release of its Annual Energy Outlook that projects U.S. shale oil output to peak at 4.8 million b/d in 2021, representing a major upward revision from the previous outlook that forecast a peak of 2.8 million b/d in 2020.

In addition to the rising shale oil production attracting global attention, we also see other interesting developments in the world. In one of these developments, Mexico's Parliament passed an energy reform bill (a constitutional amendment) on December 12, taking the first major step forward to opening its upstream oil sector to foreign companies. In Mexico where state-run oil company PEMEX has monopolized the oil upstream sector, crude oil production has long been slumping. While foreign companies' participation in the industry had been recognized as necessary and important, the upstream oil sector's opening to foreign companies had been left untouched as a sensitive political problem due to strong support for resource nationalism in the country. It is significant that the current government has made a courageous decision and taken the initiative to pave the way for opening the upstream oil sector to foreign firms. In order to allow the opening to make effective achievements, the Mexican government will have to secure local assembly approval in a political process and create a specific system for encouraging foreign companies to take part in the upstream oil sector. If Mexico as one of the leading oil producing countries opens its upstream oil sector steadily, however, its production may expand over a medium term. In this sense, the Mexican development is attracting global attention.

We must also pay attention to Iran's future oil production. The recent Geneva agreement represented only an interim accord under which Iran would freeze its nuclear development program for six months in exchange for Western countries' partial relaxation of economic sanctions on Iran. Given U.S. domestic political conditions including Congress's opposition to the deal with Iran as well as the 2014 midterm Congressional election, Iran's future negotiations with Europe and the United States are uncertain. If economic sanctions on Iran are eased or lifted, however, it may pave the way for Iran to restore and expand oil production over a medium term. Iran might have acknowledged that its buyback scheme is not attractive for foreign companies. Depending on specific changes in the scheme and the termination of the sanctions, we will need to pay attention to Iran's oil production potential over a medium term due to its past peak production level of 6 million b/d (in the first half of the 1970s).

The Middle East also includes Iraq that has announced plans to substantially expand oil production capacity. Although it had once offered a very ambitious plan to boost the capacity beyond 10 million b/d, security deterioration, infrastructure constraints, investment terms and conditions for foreign companies and other challenges have prompted a rising number of stakeholders and experts to expect the Iraqi oil production capacity to be less than the ambitiously planned level. Nevertheless, Iraq's production expansion will still be large. For example, the abovementioned IEA outlook estimates Iraq's crude oil output in 2020 to double from the present level to 5.8 million b/d.

In addition, several oil producing countries are expected to considerably expand oil output by around 2020, including Canada expected to increase unconventional oil production, Kazakhstan stepping up the Kashagan oil development project, and Brazil proceeding with deep offshore oil development. Furthermore, Russia's shale oil development and Venezuela's upstream oil sector reform, though remaining uncertain at present, could also impact global oil supply over a medium to long term.

The abovementioned plans represent only possibilities. Whether these plans could be implemented is still very uncertain. In fact, there are many political, economic, institutional and technical constraints and challenges that must be cleared for implementing these plans. But it may be significant to anticipate what would happen if the potential great oil supply expansion over a medium term is realized.

Depending on global oil demand trends at a specific time, the medium-term oil supply expansion could greatly pressure the international oil supply-demand balance into easing. Attracting attention then may be the response from the Organization of the Petroleum Exporting Countries, in particular Saudi Arabia. The oil kingdom may then have to take into account not only short-term adjustments of international oil supply and demand but also how to maximize its oil income over a long term and its geopolitical strategy in the Middle East. Relevant oil market changes may cause oil

price fluctuations that will greatly impact Asian liquefied natural gas prices linked to crude oil prices. Given these points, we may have to pay much attention to developments related to a global oil supply expansion in projecting the medium-term international energy situation.

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