

Impacts of East Japan Great Earthquake on Oil Supply and Demand (as of April 5)

The Institute of Energy and Economics, Japan

- Operable refineries in Japan have achieved operation almost at full capacity. The problem of petroleum product shortage still remains in the earthquake affected areas, but steady progress has been made to restore the supply networks, including oil tank facilities and service stations.
- In the near future, attention will be paid to the time when additional oil-fired power plants will start operation, and the volume and timing of the oil demand increase for power generation.
- Although slight, some price increases are beginning to be observed in domestic and international product markets, mainly heavy oil and diesel oil markets, as effects of the earthquake.

In order to secure product supply to the affected Tohoku region, the utilization rates have been raised and the refining capacity has been increased at a high pace at refineries nationwide. As of March 30, the average utilization rate of operable refineries in Japan reached 96.5%, and refineries in unaffected western Japan achieved rates exceeding 100%. In parallel to such efforts, crude oil processing capacity was boosted by as much as 100,000 B/D in total at three refineries (JX Mizushima, Cosmo Yokkaichi, and Cosmo Sakaide). While oil companies are likely to continue maintaining such full-capacity operation, given that increased demand is expected in the future for heavy oil for power generation and for diesel oil for reconstruction projects in affected areas, there will be a question of how the production balance should be achieved with other complementary petroleum products, such as gasoline and kerosene.

Full-fledged restoration efforts have also been made in the downstream of product supply chains. According to the Petroleum Association of Japan (PAJ), while operations were suspended at 29 oil tank facilities mainly in affected areas, such as Iwate and Miyagi prefectures, immediately after the earthquake, shipping activities had been resumed at 24 (83%) of those facilities as of April 1. In addition, about 80% (2,278 stations) of all service stations that are run by seven domestic primary distributors and located in six Tohoku prefectures are in operation. PAJ forecasts that, in line with progress in the restoration of these supply systems, the current petroleum product shortage in the affected areas will be resolved by mid-April.

Imports of various petroleum products have also been observed. From April 2 to April 3, gasoline and diesel oil (10,000 tons each), which were offered for free by China as relief supplies, arrived in Japan. Also, there seem to have been moves by electric power companies to procure heavy oil and by oil companies to import gasoline and diesel oil. Amid such developments, the product markets in Singapore showed signs of rallying. In particular, the prices of diesel oil and heavy oil have risen by 4–5% since before the earthquake (however, this price hike, which is also affected by the crude oil price hike observed during the same period, is not necessarily solely attributable to the demand surge in Japan following the

earthquake). In the near future, attention will be paid to the time when oil-fired power plants, such as the Kashima Power Station, which are aimed to achieve full operation by summer, will start operation, and to the volume and timing of the associated heavy oil procurement.

Although slight, some effects are beginning to be observed in the prices of domestic petroleum products. According to the price survey results released by the Oil Information Center of the Institute of Energy Economics, Japan on March 30, hardly any change was observed compared with the previous week in the domestic retail prices of gasoline and diesel oil on national average, but a rise of about 2 yen/L was observed for both gasoline and diesel in the Tohoku region. The main cause for this is considered to be the local tightening of supply and demand resulting from the shipping restrictions in the region. Increases have also been observed in onshore spot prices; on average for four major regions, the prices of gasoline and diesel oil have risen by about 2–4% and the prices of Fuel oil A have risen by about 6% from the pre-earthquake levels.

Contact: report@tky.ieej.or.jp