Japan's Crude Oil Imports Down to below 200 GL

Imports in 2014 fell to a quarter-century low with spending expanding six-fold

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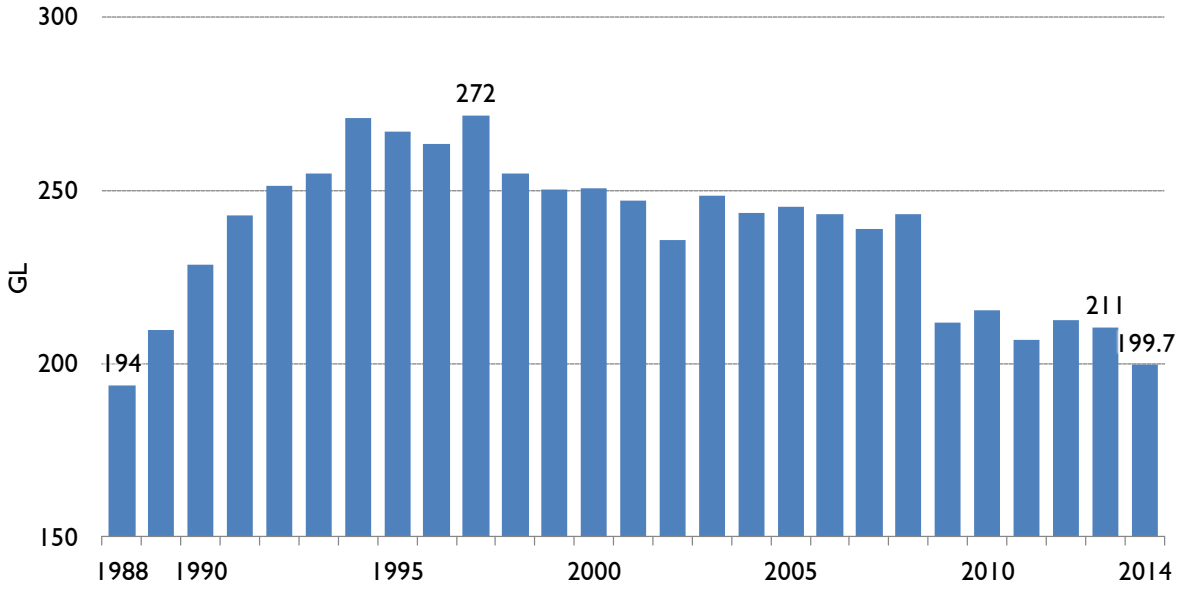
Crude oil imports down to the lowest level in 26 years

According to the Preliminary Report on Petroleum Statistics and the Natural Resources and Energy Statistics announced by the Ministry of Economy, Trade and Industry on 30 January, Japan's crude oil imports in 2014 declined by 10.89 billion litres from 210.58 GL in the previous year (Figure 1). As a result, the imports slipped below 200 GL for the first time since 1988 to 199.7 GL[1]. This level was 72 GL less than the latest peak of 271.7 GL in 1997. This decline in Japan's crude oil imports in less than 20 years is equivalent to Italy's present oil demand.

Figure 1 | Crude oil imports



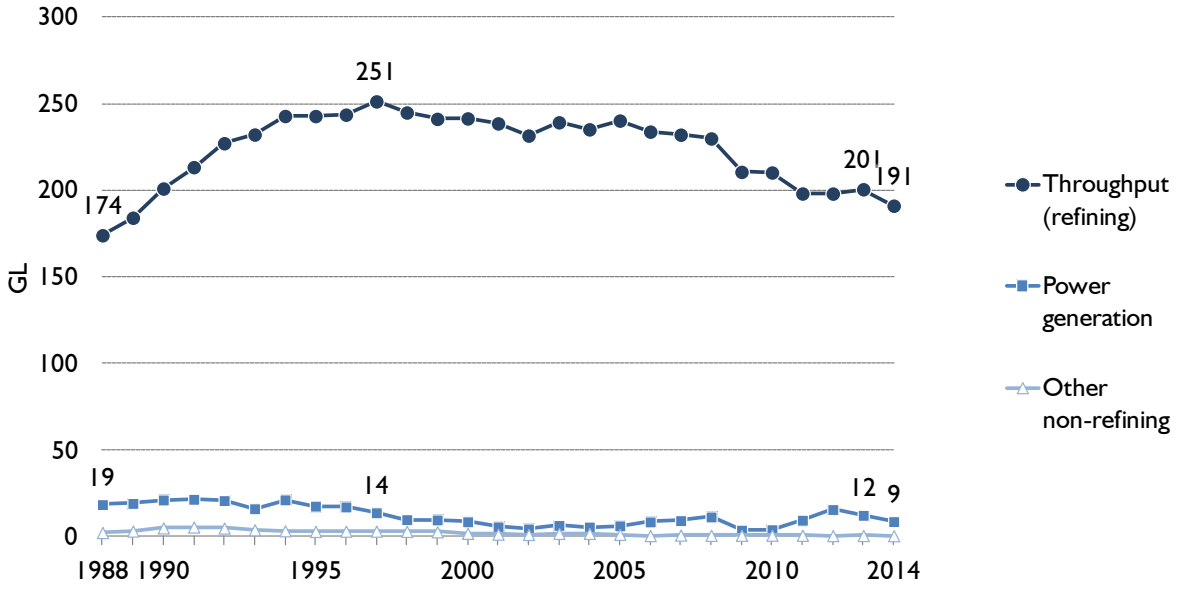
Source: METI, "Preliminary Report on Petroleum Statistics" and "Natural Resources and Energy Statistics"

Behind the decrease was an expected fall in petroleum refining

One factor behind the 11 GL decrease in crude oil imports in 2014 was that demand for crude oil for thermal power generation decreased by 4 GL due to sluggish electricity demand under an economic recovery delay and abnormal weather and to the expansion of LNG-fired power plants (Figure 2). The biggest factor behind the fall, however, was a plunge in petroleum refining. Japan's crude petroleum refining in 2014 dropped by 9 GL from the previous year, slipping below the 200 GL level that Japan had restored temporarily in 2013.

[1] 3.44 Mb/d

Figure 2 | Crude oil demand

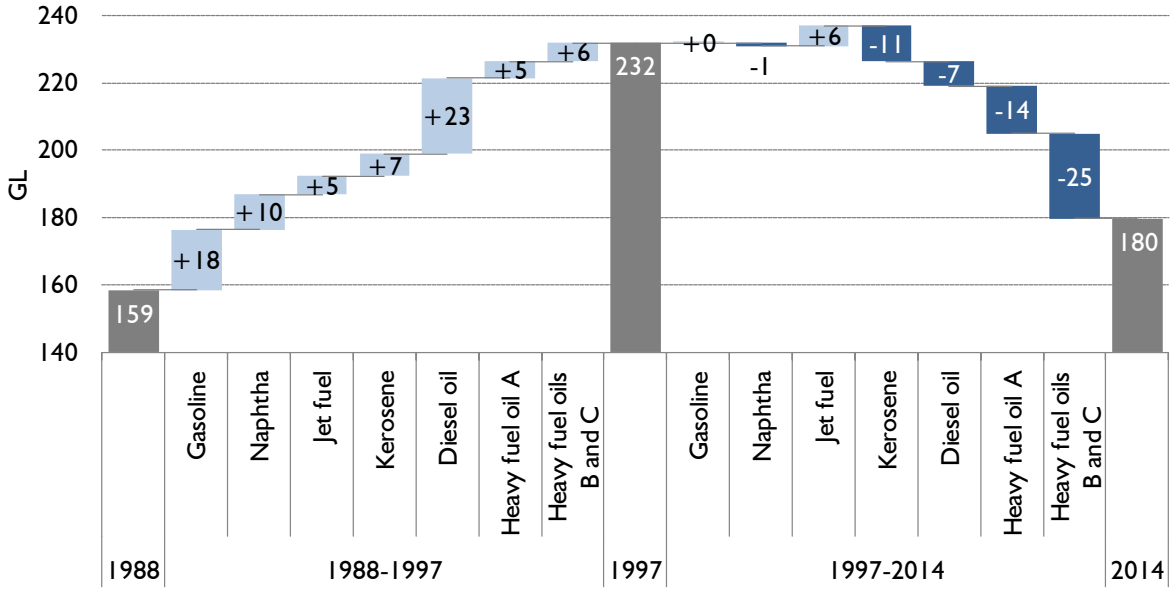


Source: METI, "Preliminary Report on Petroleum Statistics" and "Natural Resources and Energy Statistics"

The petroleum refining decline represents not only a short-term trend but also a medium-term trend.

Fuel oil production has posted a remarkable decline, including a plunge in heavy fuel oil. Between 1988 just before Japanese crude oil imports increased to 200 GL and 1997 marking the latest import peak, each category of fuel oil had logged a production expansion (Figure 3). In the past 17 years since the crude oil import peak, however, only jet fuel (and slightly gasoline) increased. Kerosene and heavy fuel oils A, B and C output in 2014 decreased by 4-20 GL from 1988.

Figure 3 | Fuel oil production changes



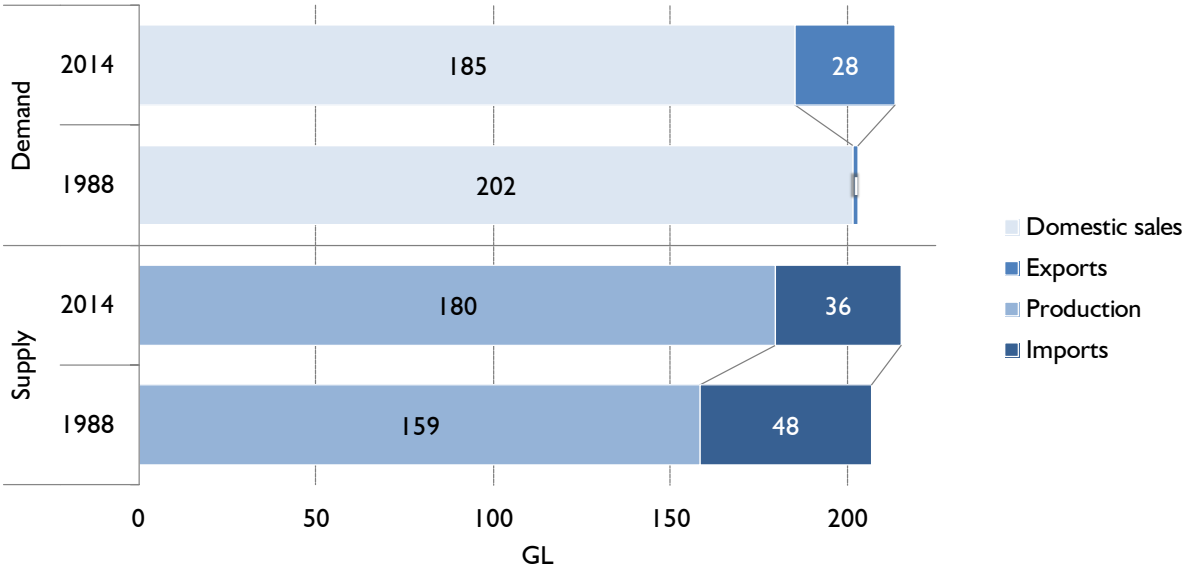
Source: METI, "Preliminary Report on Petroleum Statistics" and "Natural Resources and Energy Statistics"

Foreign demand for petroleum products is growing important

Japan's domestic fuel oil sales decreased by 16 GL from 220 GL in 1988 to 185 GL in 2014. The domestic demand fall might have greatly affected fuel oil production. Actually, however, fuel oil production in the period between the two years expanded by 21 GL from 159 GL to 180 GL.

Behind the contradictory development has been a drop in net fuel oil imports. In 1988, Japan imported 48 GL in fuel oil amounting to 25% of crude oil imports. In 2014, however, fuel oil imports declined to 36 GL, with kerosene, diesel oil and heavy fuel oil A imports diminishing (Figure 4). Meanwhile, Japan's fuel oil exports expanded from an effective zero level in 1988 to 28 GL in 2014[2]. Excluding jet fuel and heavy fuel oil B and C primarily for bonded exports, fuel oil exports centre on diesel oil. Major export destinations include Singapore, Hong Kong, Australia, Korea and China. It is reported that Japanese oil companies are not so positive about strategic exports to international markets. However, making up for a fall in domestic demand by expanding exports and cutting imports has been combined with capacity consolidation to contribute to maintaining some capacity factor[3] level for petroleum refineries in the typical process industry.

Figure 4 | Fuel oil supply-demand balance



Note: Supply does not necessarily match demand due to stock changes, etc.
Source: METI, "Preliminary Report on Petroleum Statistics" and "Natural Resources and Energy Statistics"

Exports, however, depend on international market prices and exchange rates. It is uncertain whether exports would continuously increase. The yen's current weakness supports fuel oil exports as well as other exports. At the same time, however, the oil price fall, which has been faster than the yen's depreciation, works to emphasise refinery operation and personnel cost gaps by region by lowering materials' share of total refining costs that features narrower gaps by region. For Japan with less petroleum refining capacity than neighbouring countries, oil price falls are unfavourable for exporting petroleum products.

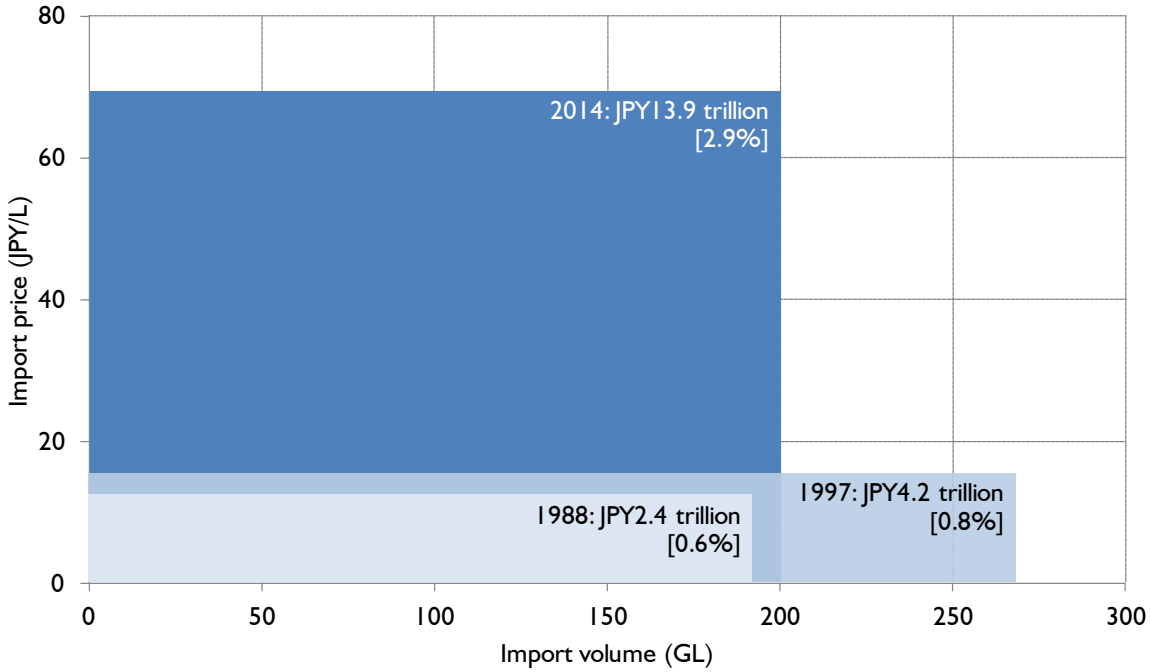
[2] In 2008 and 2009 each, Japan posted some 3 GL in net fuel oil exports.
[3] The capacity factor for petroleum refineries stood at 65% in 1988, 82% in 1997 and 81% in 2014.

Import spending rose sharply despite oil price drops

Let us turn back to crude oil imports. Whilst Japan's crude oil import volume fell back to a 26-year low, import spending soared substantially. Crude oil import value in 1988 stood at JPY2.4 trillion[4], equivalent to only 0.6% of nominal gross domestic product (Figure 5). In 2014, however, the value reached a far higher level of JPY13.9 trillion, equivalent to some 2.9% of nominal GDP.

Despite rapid drops in international oil prices since the autumn of 2014, Japan's average CIF oil import price for the whole of the year came to a historically high level of $105/bbl. Due to the far higher oil price, the total crude oil import value in 2014 was far higher than in 1988 when the average import price stood at $16/bbl, or in 1997 when the average price came to $21/bbl with the import volume being over 30% more than at present[5]. Based on the oil price of $45/bbl and the yen-dollar exchange rate of JPY118/USD in late January 2015 when this report was written, payments for some 200 GL in crude oil imports are estimated at JPY6.9 trillion, equivalent to 1.4% of nominal GDP, representing a sharp fall of some 50% from 2014.

Figure 5 | Crude oil import volume, price and value



Note: The rectangular part indicates the import value. In each bracket is the ratio of the import value to nominal GDP. Imports include raw oil.
Source: Compiled from Ministry of Finance "Trade Statistics."

Due to an oil demand decline, Japan's crude oil imports are expected to decrease in the future. Crude oil, however, will remain as Japan's largest import item and economically important, irrespective of whether the trend is good or bad. Whilst benefitting from the present weakness of oil prices as a blessing, we must pay attention to the point that how long the weakness will continue is uncertain. Whilst it never stays rainy long, it also never remains fair long.

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[4] Source: Ministry of Finance "Trade Statistics." Including raw oil.
[5] The yen-dollar exchange rate of JPY105/USD in 2014 represented the yen's appreciation from 1988 (JPY128/USD) and 1997 (JPY121/USD).