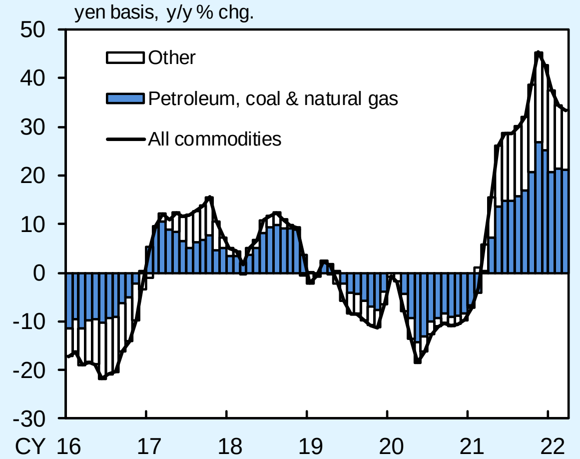
## (Box 2) Impact of a Rise in Import Prices of Energy-Related Items on the CPI

Import prices in Japan have recently risen significantly (Chart B2-1). This is mainly explained by a rise in prices of international commodities, particularly energy-related items. Import prices of crude oil, liquefied natural gas (LNG), and coal have continued on an uptrend since the second half of 2020. The basic background to this is a global recovery in demand, while it is also attributed to supply factors such as restraints on investment in production facilities for fossil fuels owing to international trends toward decarbonization. Import prices of these items have risen further to date, mainly due to supply concerns and heightened geopolitical risks as a result of Russia's invasion of Ukraine (Chart B2-2). Under these circumstances, energy prices in Japan's CPI have also risen significantly, pushing up the year-on-year rate of change in the CPI (all items less fresh food) for March 2022 by around 1.5 percentage points (Chart 42). This box examines the impact of the rise in import prices of energy-related items on Japan's CPI, mainly for petroleum products and electricity charges.

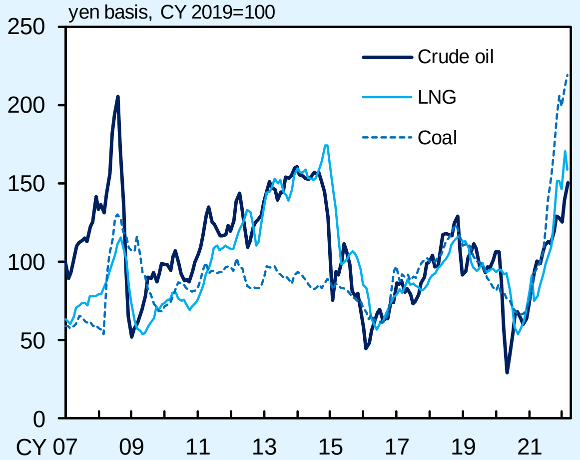
With regard to the impact that the rise in import prices of energy-related items has on energy prices in the CPI, its degree and timing are different between "petroleum products" (such as gasoline and kerosene) and "electricity as well as manufactured and piped gas charges." First, retail prices of gasoline -- which has the largest weight in petroleum products -- had followed an uptrend since the second half of 2020, rapidly reflecting market prices and import prices of crude oil in yen terms (Chart B2-3). Nevertheless, as the

**Chart B2-1:** Developments in Import Prices



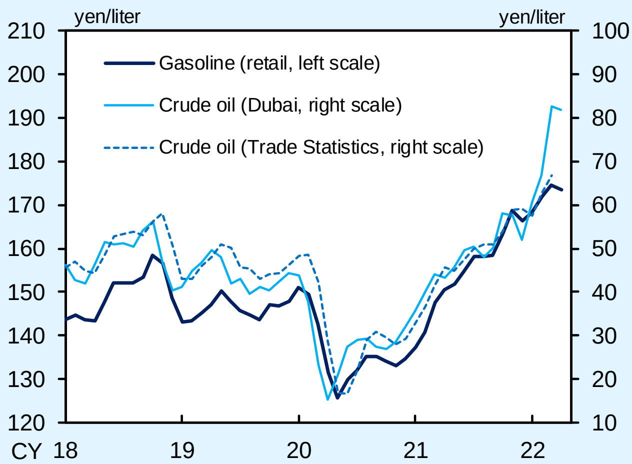
Source: Bank of Japan.

**Chart B2-2:** Import Prices of Energy-Related Items



Source: Bank of Japan.

**Chart B2-3:** Crude Oil and Gasoline Prices

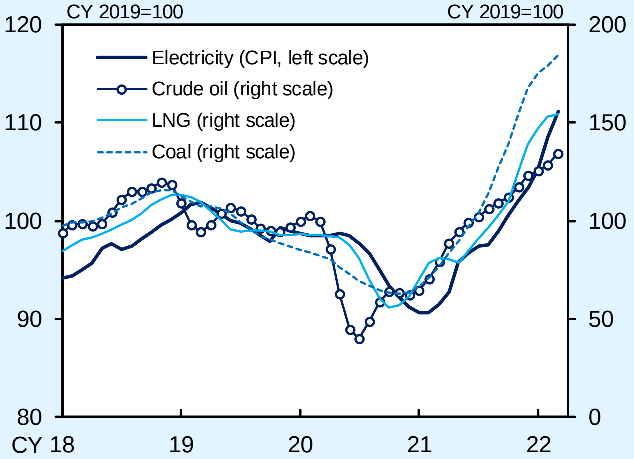


Sources: Agency for Natural Resources and Energy; Ministry of Finance; Nikkei Inc.
Note: Figures for gasoline prices include the consumption tax.

government introduced in December 2021 a measure to provide subsidies to petroleum distributors and importers, with the aim of curbing a sharp rise in fuel oil prices, the rise in gasoline prices recently has been limited compared with that in import prices of crude oil.[22] As long as measures of this kind are in place, the increase in gasoline prices is expected to be curbed, even when crude oil prices are at high levels.[23]

Second, of energy prices, electricity charges are decided by each electricity producer based on the weighted average of import prices of crude oil, LNG, and coal for the period from five to three months earlier, under the fuel cost adjustment system.[24] Thus, electricity charges in the CPI move according to market prices and import prices, such as of crude oil, with some time lag (Chart B2-4). That said, the rise in electricity charges has been limited compared with the recent surge in LNG and coal spot prices, as major electricity producers in Japan purchase a large amount of LNG and coal under long-term contracts. On the other hand, the contract prices of LNG are often set according to the developments in crude oil prices several months earlier; therefore, import prices of LNG are highly likely to rise further, affected by increases in crude oil prices to date. Taking into account such pricing

**Chart B2-4:** Crude Oil and Electricity Prices




Sources: Ministry of Internal Affairs and Communications; Ministry of Finance.
Notes: 1. Figures for crude oil, LNG, and coal prices are based on the *Trade Statistics* and show the 3-month backward moving averages.
2. Figures for electricity prices include the consumption tax.

22 The subsidies are applied to fuel oil such as diesel oil, kerosene, and heavy fuel oil, in addition to gasoline. Of these items, gasoline and kerosene are covered in the CPI.

23 The government compiled comprehensive emergency measures to counter sharply rising crude oil prices, commodity prices, and the like in April 2022. As part of these measures, it expanded subsidies to petroleum distributors and importers and extended the period during which subsidies are provided.

24 The price setting system for manufactured and piped gas charges is roughly the same as that for electricity charges.

process of LNG and the fuel cost adjustment system, electricity charges are projected to continue pushing up the year-on-year rate of change in the CPI (all items less fresh food) through the second half of fiscal 2022, with somewhat of a lag from the earlier rise in prices, such as of crude oil. Nevertheless, electricity producers have their respective upper limits on the extent to which they can pass on the rise in energy costs through the fuel cost adjustment system to electricity charges for households. The energy costs that exceed the limits will not be passed on to households and thus will not affect the CPI, unless such upper limits are changed.

Lastly, the rise in import prices of energy-related items has mixed effects on the CPI for items other than energy; specifically, while it may push up the CPI for items other than energy through an increase in intermediate input costs (see also Box 3), it may also push down the CPI for such items through downward pressure on the real economy and, in turn, the output gap, brought about by deterioration in the terms of trade (see also Box 4). When considering the impact of the rise in import prices of energy-related items on the overall CPI, it is necessary to take into account these effects on the CPI for items other than energy, in addition to the aforementioned direct impact on energy prices.