

Japan's Energy Security Severely Shaken by the De Facto Blockade of the Strait of Hormuz

Ken Koyama, PhD

Chief Economist, Senior Managing Director
The Institute of Energy Economics, Japan

The war over Iran that began on February 28 has shown no sign of progress toward a ceasefire or settlement. U.S. and Israeli attacks on Iran continue unabated, consisting of intense strikes targeting military installations, critical infrastructure, and key political/military figures. Iran, for its part, has continued its retaliatory operations, directing attacks not only against Israel but also against neighboring Gulf oil-producing states, including assaults on U.S. military bases and essential energy infrastructure. Facing the initiation of military operations seemingly aimed at “regime change,” Iran appears to have adopted a posture of “desperate retaliation.” Despite the overwhelming military superiority of the United States and Israel, Iran seems determined to wage an “asymmetric” war desperately.

Against this backdrop, an outcome long deemed unthinkable under conventional wisdom has materialized: the de facto blockade of the Strait of Hormuz. Handling 20 million barrels of oil per day and 80 million tons of LNG annually, the strait has been recognized as the world's most critical energy transportation chokepoint. Yet few believed that a full-scale blockade would ever occur. For Iran as well, closing the strait would constitute an act of self-destruction; while useful as a “threat”, it was considered virtually impossible that Iran would proceed with an actual full-blockade. However, this long-standing assumption has collapsed amid the current conflict.

The volumes of oil and LNG that transit the Strait of Hormuz are so immense that no actor can fully substitute for them should supply be halted. For crude oil, Saudi Arabia and others possess pipelines bypassing the strait, and these are being fully utilized during the current emergency. Saudi Arabia, Kuwait, UAE and others have substantial spare crude production capacity, yet because this capacity lies within the Persian Gulf, it cannot be effectively utilized under a blockade. Consumer nations do maintain large-scale strategic petroleum reserves, and in response to the crisis, Japan—and subsequently the IEA—announced and implemented major stock releases. Nevertheless, even these alternative supplies cannot fully compensate for the lost volumes. For LNG, there is essentially no meaningful global spare capacity, and consuming nations hold operational inventories rather than strategic reserves. As a result, the unprecedented blockade has triggered one of the largest supply disruptions in the history of international energy markets—one that continues to this day.

Confronted with this situation, global energy markets are gripped by severe supply anxiety. Since the onset of the conflict, soaring crude oil prices have become one of the world's foremost concerns alongside the military situation. On March 9, WTI crude futures momentarily surged to the \$119-per-barrel range. Prices subsequently plunged amid speculation about the war's trajectory, only to stabilize at elevated levels in the \$90 range and again breach \$100 in short-lived spikes. Depending on developments in the conflict, crude prices are likely to fluctuate sharply; however, the underlying trend of persistently high prices remains unbroken, with further escalation by no means possible. As long as the Strait of Hormuz remains effectively closed and oil flows through it remain halted, downward pressure on global supply cannot be alleviated.

The surge in crude oil prices has profound implications for global energy security. As the world's largest traded energy commodity, higher crude prices exert powerful downward pressure on the global economy. When prices of essential fuels such as gasoline rise sharply, the impact on everyday life and economic activity becomes severe. Even advanced economies now struggle to withstand the political, economic, and social pressures created by such energy price spikes. This is why emergency stock releases were swiftly decided, and in Japan's case, a price stabilization mechanism was introduced to cap gasoline prices at around 170 yen per liter. Higher crude prices also exert broad inflationary pressures due to the widespread use of petroleum products. Furthermore, because LNG procurement in Japan is often indexed to crude prices with a roughly four-month lag, LNG prices rise accordingly. As LNG remains Japan's primary power generation fuel, electricity prices will face upward pressure with an additional time lag. In short, rising crude prices drive increases across Japan's entire energy cost structure.

Among commodities affected by the blockade, LNG and petroleum products have experienced even greater price reactions than crude oil. Because it is extraordinarily difficult to replace the LNG volumes lost due to the blockade, spot market prices—determined by real-time supply-demand conditions—have risen dramatically. On a calorific-equivalent basis, spot LNG prices have reached levels comparable to nearly \$150 per barrel of crude. Thus, the de facto closure of the Strait of Hormuz has produced visible price spikes that threaten global and Japanese energy security alike.

Yet even more serious than these price increases are the challenges associated with securing physical supplies. Price impacts affect all nations equally—whether energy importers or producers. Even the largely self-sufficient United States must remain sensitive to rising gasoline prices, yet the US is unlikely to face physical shortages due to the blockade. In contrast, countries with high import dependence—especially those reliant on supplies that transit Hormuz—could face profound difficulties securing crude oil if the blockade persists. Japan relies on the Middle East for 95% of its crude oil imports, nearly all of which have historically passed through the Strait. Those supplies have now been

largely halted. Should the blockade continue, Japan may face an unprecedentedly dangerous situation regarding its oil supply—arguably the most severe since the First Oil Crisis, when Arab producers imposed an embargo on the bulk of Japan’s crude supply. The present crisis thus carries potentially grave implications for Japan’s energy security. (It should be noted, however, that Japan’s dependence on LNG transiting the Strait of Hormuz is only around 6%, making the situation fundamentally different from oil.)

Nevertheless, it is important to recognize that Japan’s resilience has improved significantly since the First Oil Crisis. Japan now maintains more than 250 days’ worth of oil reserves through national and private stockpiles. International coordination mechanisms for emergency response, particularly cooperation with the IEA, are well established. Most significantly, the share of Middle Eastern crude in Japan’s primary energy supply has been dramatically reduced. In FY1973, crude oil accounted for 74% of primary energy supply, with 78% of crude imports sourced from the Middle East—meaning Middle Eastern crude accounted for 58% of primary energy. By FY2024, crude oil’s share of primary energy had fallen to 30%, and although the Middle East accounted for 95% of crude imports, Middle Eastern crude represented only 28% of primary energy. The “weight” of Middle Eastern oil in Japan’s overall energy system (and thus its economy) has fallen by 30 percentage points. This reflects the cumulative achievements of Japan’s comprehensive energy security policies.

Even so, the severity of the current situation remains unchanged. Despite its declining share, oil remains Japan’s largest energy source, and securing its stable supply is essential to safeguarding the national economy and daily life. Given the profound uncertainty surrounding when the blockade of the Strait of Hormuz—the root cause of the current crisis—might be lifted, Japan must urgently prepare for a wide range of potential contingencies. This necessitates the formulation and implementation of comprehensive and robust supply-security measures across both the short term and the medium to long term. Only through such sustained and multifaceted efforts can Japan begin to address, in a fundamental manner, its structural dependence on the Strait of Hormuz.

Contact: report@tky.iej.or.jp

The back issues are available at the following URL.

http://eneken.iej.or.jp/en/special_bulletin.html