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Strengthening Oil Security

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The crisis at the Strait of Hormuz is posing a particularly severe impact on oil supplies to Asia. At the "AZEC+ Online Summit on Energy Resilience" on April 15, Prime Minister Takaichi announced the launch of the POWERR Asia initiative. The initiative aims to support the strengthening of oil security in Asia. Its scope of support is broad, ranging from procuring oil for immediate need to establishing oil stockpiling systems. Given the severity of the current crisis, the initiative is critically important, as it will not only benefit the Asian countries receiving support but also help strengthen supply chains for industrial products destined for Japan.

On the other hand, caution is needed when it comes to supporting infrastructure investment. This relates to alignment with carbon neutrality (CN) goals. It is not to say that we should avoid investing in fossil fuels because we have carbon neutrality goals. In reality, oil demand in Asia continues to grow, while there is a shortage of infrastructure essential for a stable oil supply. Therefore, investment in oil infrastructure is indispensable. However, if the world aims for CN in the long term, it is also true that excessive investment in fossil fuel infrastructure increases the risk of those assets becoming stranded in the future.

In Japan, for example, Idemitsu's Chiba Refinery began operations in 1963 and, thanks to quality maintenance works and upgrades, has remained in active service more than 60 years till now. In another example, the ENEOS Wakayama Refinery, which closed in 2023, began operations in 1941 and remained in operation for an astonishing 82 years. Many countries in Asia have set their CN targets for the period between 2050 and 2070. Although lifespans vary by facility, large-scale petroleum infrastructure may continue to operate beyond the target year for CN.

What strategies might be available to overcome this dilemma? "Carbon Neutrality" literally does not aim for zero carbon emissions; rather, it is premised on the use of carbon dioxide removal technologies (CDR) such as carbon capture and storage (CCS). Oil demand may remain even at the time when we achieve CN. It means that the necessary oil supply infrastructure will not become stranded assets but will instead become a precious supply capacity. Although this is an

extremely challenging task, the dilemma can be resolved by accurately identifying this “hard-to-abate” oil demand and simultaneously investing in CDRs to offset resulted carbon dioxide emissions.

In other ways, this dilemma can be addressed by designing new construction plans that incorporate the future repurpose for decarbonized liquid fuels—infrastructure that will continue to be used even in a carbon-neutral society. For example, a tank can be initially used to store oil and later repurposed for synthetic fuels, e.g., biofuels or Sustainable Aviation Fuel (SAF). Repurposing oil infrastructure that has been fully depreciated would also help reduce the cost of supplying decarbonized liquid fuels.

Furthermore, minimizing the growth of oil demand through energy conservation and fuel switching can help alleviate this dilemma. The more oil demand increases, the greater the required infrastructure investment becomes, and the higher the risk of assets becoming stranded in the future. Conversely, if we can curve the oil demand increase, we can strengthen oil security with a smaller investment.

While this is a difficult challenge for rapidly growing developing countries in Asia, it is important to pursue both oil security and decarbonization by combining various approaches. We hope that this crisis will serve as a catalyst for structural reform to strengthen oil security.

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