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Japan Electric Power Information Center, U.S.A.

1 METI Will Formulate Investment Standards for Securing the Resources and Energy for Decarbonization

On May 29, 2023, the Ministry of Economy, Trade and Industry (METI) and the Japan Organization for Metals and Energy Security (JOGMEC) held a meeting of the Resources and Fuel Subcommittee of the Advisory Committee for Natural Resources and Energy, which is an advisory body to METI. During the subcommittee meeting, METI and JOGMEC announced a policy to create investment criteria for countries that possess essential minerals and resources for decarbonization and next-generation fuels. After selecting 24 investment prioritized countries to be analyzed, they will develop a supply chain for the joint procurement of resources by the public and private sectors. This new policy will contribute to Japan's goal to reach net-zero greenhouse gas emissions by 2050.

During the G7 Ministers' Meeting on Climate, Energy and Environment in Sapporo on April 15-16, 2023, the parties reached an agreement on challenges to be addressed by each country. The agreement covered a wide range of energy resources, including fossil fuels/CCUS, new fuels (hydrogen ammonia, bioenergy, recycled carbon fuel, etc.), and critical minerals. Based on this agreement, JOGMEC proposed a new direction for Japan's energy resources diplomacy to promote green transformation (GX), an initiative that seeks to achieve both carbon neutrality and economic growth.¹ It emphasizes the need to shift from the conventional stance of focusing on single resources, such as liquefied natural gas, to instead strategically considering the new decarbonization policies set by other nations to secure foreign critical minerals and natural resources. JOGMEC plans to set investment standards for countries that possess essential minerals.² METI's Agency for Natural Resources and Energy (ANRE) stressed that the direction of partnerships with Japan should be established for each priority country. The agency is expected to finalize a policy decision based on the draft standards JOGMEC will present at the subcommittee meeting in June 2023.³

JOGMEC raised the following four items as important considerations to understand and analyze the characteristics and circumstances of each resource-rich country:⁴

- 1. Potential resources
- 2. Economic efficiency
- 3. Export capacity and stability
- 4. Strategic significance in terms of resource and energy policy

Based on the items above, 24 countries were selected as a target of analysis from the perspective of the potential supply of resources and fuels to Japan (Figure 1). The list of target countries may be revised in the future.

¹ <u>https://www.meti.go.jp/shingikai/enecho/shigen_nenryo/pdf/037_04_00.pdf</u>

² <u>https://www.meti.go.jp/shingikai/enecho/shigen_nenryo/pdf/037_04_00.pdf</u>

³ https://www.meti.go.jp/shingikai/enecho/shigen_nenryo/pdf/037_03_00.pdf

⁴ <u>https://www.meti.go.jp/shingikai/enecho/shigen_nenryo/pdf/037_04_00.pdf</u>

	5 Types	Target Countries of Analysis
1.	Comprehensive partner countries (friendly developed countries)	U.S., Australia, Canada, Norway
2.	Traditional stable supply countries	United Arab Emirates (UAE), Oman, Qatar, Saudi Arabia, Chile
3.	Environmental improvement countries (high potential countries)	Democratic Republic of the Congo (DR Congo), Zambia, Namibia, Peru, Madagascar, Mozambique
4.	Regional partner countries (geographically close countries)	Indonesia, Thailand, The Philippines, Vietnam, Malaysia
5.	Emerging powers	Argentina, India, Brazil, South Africa

Figure 1:24 Target Countries of Analysis Selected by JOGMEC⁵

The following three factors have been considered in analyzing each target country's status:

- 1. Minerals: The analysis focused on metal minerals such as copper, lithium, nickel, cobalt, and rare-earth elements, which are essential for decarbonization efforts such as EVs.
- 2. Fossil Fuel: In addition to the existing oil, gas, and coal reserves, potential suitable CCS sites were also considered.
- 3. Alternative Fuels: The analysis considered new fuels such as hydrogen ammonia, recycled carbon fuel, and biofuels.

⁵ <u>https://www.meti.go.jp/shingikai/enecho/shigen_nenryo/pdf/037_04_00.pdf</u>

2 METI Mandates Oil Wholesalers to Use Sustainable Aviation Fuel (SAF) for 10% of Aviation Fuel Supplies at Japanese Airports by 2030

On May 26, 2023, the Ministry of Economy, Trade and Industry's (METI) Agency for Natural Resources and Energy (ANRE) and the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) held the third meeting of the Public-Private Council to Promote the Introduction of Sustainable Aviation Fuel (SAF) to discuss measures to support the domestic penetration of SAF. At the meeting, the ministries presented a draft interim proposal based on their discussions to date.⁶

Private sector participants in the meeting included aviation fuel wholesalers such as ENEOS and Idemitsu Kosan, trading companies like Itochu Corporation, airline companies, and airport operators. In addition to ANRE and MLIT, the Ministry of Agriculture, Forestry and Fisheries (MAFF), the Ministry of the Environment (MOE), and the New Energy and Industrial Technology Development Organization (NEDO) participated as observers.⁷

The draft interim proposal requires oil wholesalers to use SAF for 10% of aviation fuel supplied to domestic and foreign airlines at Japanese airports by 2030, based on the Energy Supply Structure Advancement Act.⁸ As part of the GX Basic Policy⁹, the government plans to replace 10% of fuel consumption by Japan-based airlines with SAF by 2030 to help decarbonize the aviation sector. The government will establish new regulations in line with this target.

In accordance with the Revised Civil Aeronautics Act (enacted on December 1, 2022), the government announced the "Basic Policy for Promoting the Decarbonization of Aviation¹⁰," which requires 10% of all aviation fuel to be SAF by 2030. The Basic Policy requires airline companies to submit a "decarbonization promotion plan" to MLIT. The draft interim proposal will direct the airlines to include a statement that 10% of aviation fuel must be SAF by 2030 in the promotion plan.¹¹ In addition to the new regulations which would be developed, the draft interim proposal also provides a list of the support measures to build a system for the stable supply of SAF and to promote the domestic development and manufacturing of internationally competitive SAF.

Currently, the primary raw material for SAF is waste cooking oil. However, there is a shortage of supply as well as a price increase due to rising global demand, meaning Japan must facilitate efforts to secure a stable supply of raw materials. SAF manufacturing technology expected to develop in the future includes first-generation bioethanol made from materials such as corn and sugar can; non-food raw materials

⁶ <u>https://www.meti.go.jp/shingikai/energy_environment/saf/003.html</u>

⁷ https://www.meti.go.jp/shingikai/energy_environment/saf/pdf/003_02_00.pdf

⁸ https://www.meti.go.jp/shingikai/energy_environment/saf/pdf/003_07_00.pdf

⁹ https://www.meti.go.jp/press/2022/02/20230210002/20230210002 1.pdf

¹⁰ <u>https://www.mlit.go.jp/report/press/content/001574001.pdf</u>

¹¹ <u>https://www.meti.go.jp/shingikai/energy_environment/saf/pdf/003_07_00.pdf</u>

such as second-generation ethanol and microalgae; garbage such as waste plastics; and materials using CO_2 and hydrogen. By 2050, synthetic fuel-derived SAF (eSAF) using CO_2 and hydrogen is expected to account for about half of the raw materials used for SAF.¹²

The interim summary proposal indicates that support measures include capital investment, assistance with building a supply chain for procuring SAF raw materials from overseas, tax exemptions for producers, etc.:

- Capital investment support
- Assistance in establishing a supply chain to procure SAF raw materials from overseas
- Tax relief for producers
- Support for the technical development of SAF derived from "non-edible sources" such as algae and garbage

¹² <u>https://www.meti.go.jp/shingikai/energy_environment/saf/pdf/003_07_00.pdf</u>

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