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Japan Energy Newsletter

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

1 The Second Japan-U.S. Clean Energy and Energy Security Initiative (CEESI) Plenary Meeting Was Held between Japan's METI and U.S. DOE¹

On March 19, 2024, the Ministry of Economy, Trade and Industry (METI) jointly held the Second Japan-U.S. Clean Energy and Energy Security Initiative (CEESI) Plenary Meeting with the U.S. Department of Energy (DOE), which is an initiative to accelerate bilateral cooperation in the development and dissemination of clean energy technologies. The meeting focused on past achievements in the clean energy field, as well as future cooperation, and was held in advance of the U.S.-Japan Leader's Summit scheduled for April 2024. Additionally, the two parties reached an agreement at the meeting to further promote cooperation between Japan and the U.S.

The meeting was chaired by Dr. Andrew Light, Assistant Secretary of Energy for International Affairs, DOE, and Mr. Shinichi Kihara, Director-General for International Policy on Carbon Neutrality, METI.

Through Japan's Green Transformation (GX) Promotion Act and the U.S. Inflation Reduction Act (IRA), the two countries plan to promote clean energy supply chains, accelerate the energy transition, and promote cooperation. Their cooperation will focus on fields such as carbon capture, utilization and storage/carbon recycling (CCUS/CR), including synthetic methane (e-methane); floating offshore wind power; perovskite solar cells; geothermal energy; hydrogen and its derivatives, including ammonia; and nuclear power. The two countries exchanged information on the current progress and past achievements in these fields, agreed to accelerate the future cooperation between Japan and the U.S. in these areas, and crafted an outcome document.

METI and DOE noted the progress and development of the CEESI task force on the following fields:²

- 1) CCUS/CR (including e-methane)
 - METI and DOE have thus far held three working group meetings, both online and in-person in the U.S., from 2021-2023. Both agencies welcome the progress of the ongoing CCUS/CR projects between Japanese and U.S. businesses.
 - Japanese and U.S. private companies have signed a basic agreement on e-methane to avoid CO₂ double counting. This will promote cooperation between the national institutions in the two countries regarding R&D bases for CCUS/CR activities.
 - DOE has invited the Japanese government and private companies to a carbon management workshop scheduled to be held in Alaska in May 2024 to discuss CO₂ transport.
 - Further consideration will be given to planning for the next working group meeting.

¹ <https://www.meti.go.jp/press/2023/03/20240322005/20240322005.html>

² <https://www.meti.go.jp/press/2023/03/20240322005/20240322005-2.pdf>

2) Renewable Energy/Wind Power

- The first offshore wind power workshop was held in December 2022. Japan will continue discussions with the U.S. to coordinate and facilitate breakthroughs in the DOE's new Floating Offshore Wind Shot initiative.
- Additionally, Japan intends to launch a new "technology cooperative" for industry-academia collaboration, which will work to reduce costs and realize the mass production of floating offshore wind power generation. Japan will welcome additional partners to work with the U.S. towards these goals. Specifically, Japan aims to deploy 30-45GW of offshore wind power by 2040, while the U.S. aims to introduce 15GW of floating offshore wind power by 2035.
- Regarding solar power, the two countries will also cooperate closely in researching perovskite solar cell technologies.

3) Geothermal

- At the G7 Sapporo meeting in April 2023, DOE and METI signed a memorandum of cooperation on geothermal energy. They are in the process of pursuing the next steps for U.S.-Japan collaboration.

4) Power Grid

- In November 2022, a meeting took place between DOE's Assistant Secretary for Power Grid Systems and Components and METI officials.
- DOE's interests in common with METI include HVDC, grid congestion management, and microgrids. They agreed to continue exchanging views on power systems, including HVDC.

5) Hydrogen/Fuel Ammonia

- In November 2022, the DOE-METI CEESI working-level group held its first meeting on hydrogen and ammonia in Tokyo.
- METI and DOE welcomed the progress in cooperation between Japanese and U.S. companies on building hydrogen hubs. They also shared their expectations for further collaborations on building a large-scale and resilient global supply chain based on carbon intensity and expanding the utilization of hydrogen.

6) Nuclear

- The first nuclear power workshop took place in June 2022. Japan and the U.S. are committed to accelerating the development and global deployment of innovative reactors and small modular reactors.
- Japan and DOE are currently coordinating on the planning for the second nuclear workshop, including the possibility of co-locating the workshop with the CNWG (DOE-METI/MEXT Bilateral Civil Nuclear Energy R&D Working Group) in Tokyo in March 2025.

7) Batteries, Sustainable Transportation, Zero Emission Vehicles (ZEVs)

- A working-level meeting was held in November 2022 to discuss the decarbonization of the transportation sector.
- The two countries will work together to coordinate with U.S. policies through an exchange of opinions and communication regarding various aspects of decarbonizing the transportation sector, such as the use of storage batteries.

2 Japanese Government Announces the Establishment of the Task Force for Safety Regulations for Fusion Power Generation³

On March 29, 2024, the Japanese government decided to establish a task force to discuss the basic concepts for ensuring the safety of nuclear fusion. The government is considering the requirements for safety achievements and the characteristics of nuclear fusion-related equipment, and plans to compile a report within the 2024 fiscal year. In Europe and the U.S., momentum has been increasing to build advanced reactors in the 2030s, mainly developed by start-ups. Based on this momentum, the Japanese government aims to establish national safety regulations that will contribute to the construction of new nuclear reactors.

On April 14, 2023, the Cabinet Office's Integrated Innovation Strategy Promotion Council developed the "Fusion Energy Innovation Strategy."⁴ In the "2023 Integrated Innovation Strategy," which was approved by the Cabinet on June 9, 2023, fusion energy was listed as one of the nine fields⁵ that the government will promote through public-private collaboration.⁶

The Fusion Energy Innovation Strategy recognizes fusion energy as a new industry and states that Japan urgently needs to compete in the global supply chain that is being developed. To this end, the government will accelerate the practical application of fusion energy, establish industrial councils, encourage start-up research and development, promote discussions on safety regulations, strengthen support for emerging technologies, and develop educational programs.⁷

The strategy calls for the early consideration of safety regulations to encourage the participation of private companies, and for the government to formulate a basic concept for ensuring safety, while considering that the principle of nuclear fusion is different from nuclear fission. The government will also establish a task force, whose members will include engineers, regulatory experts, and the public.

With the cooperation of related ministries and agencies, the government will consider the basic concept of ensuring safety, keeping in mind the need to foster the fusion industry and the development of prototype reactors.⁸

The government will launch a safety review task force in April 2024, and will compile a "basic approach to ensuring safety" after receiving public comments by the end of the fiscal year (March 2024).

³ <https://www8.cao.go.jp/cstp/fusion/6kai/6kai.html>

⁴ https://www8.cao.go.jp/cstp/fusion/fusion_senryaku.pdf

⁵ The fields are: (1) AI technology; (2) Biotechnology; (3) Quantum Technology; (4) Materials; (5) Fusion Energy; (6) Health/Medical Care; (7) Space; (8) Ocean; (9) Food/Agriculture, forestry and fisheries

⁶ https://www8.cao.go.jp/cstp/tougosenryaku/togo2023_honbun.pdf

⁷ https://www8.cao.go.jp/cstp/fusion/fusion_qaiyo.pdf

⁸ <https://www8.cao.go.jp/cstp/fusion/6kai/siryo2-2.pdf>

The main considerations are as follows:

- Situations in Japan and overseas (such as the US and UK)
- Characteristics of nuclear fusion equipment and installment, including comparisons with nuclear fission
- Safety objectives and requirements for the realization of nuclear fusion

The government also plans to start discussions at related academic societies to promote further cooperation.

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