AMT/NEWSLETTER

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Discussion Points by Japanese Government toward Enforcement of CCS Business Act

Yoshiaki Otsuki

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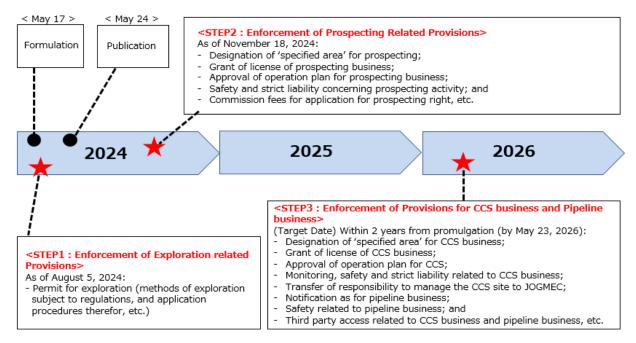
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1. Introduction

As you may know, the Act on CCS business of Carbon Dioxide (the "CCS Business Act".) concerning storage of carbon dioxide was enacted on May 17, 2024 and promulgated on May 24, 2024. Subsequently, the provisions of the CCS Business Act related to prospecting aspects have already been enforced as of November 18, 2024.

Meanwhile, the remaining provisions of the CCS Business Act, other than the provisions related to prospecting, are to be enforced by May 23, 2026 pursuant to Article 1 of the supplementary provisions of the CCS Business Act. In other words, the full enforcement of the provisions of the CCS Business Act is scheduled by May 23, 2026.

The outline of the abovementioned progress from the enactment until enforcement of the CCS Business Act is illustrated as follows:



Source:

https://www.meti.go.jp/shingikai/enecho/shigen nenryo/carbon management/ccs business system/pdf/001 05 00.p df

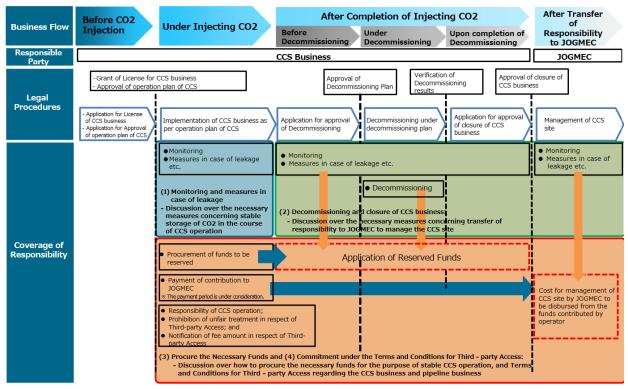
In September of this year, a new working group on the CCS Business Act (the "**Working Group**".) has been established under the Ministry of Economy, Trade and Industry ("**METI**") to discuss the details of design of a CCS business system with a view to the full enforcement of the CCS Business Act. This newsletter outlines the main discussion points at the first meeting of the Working Group.

2. Discussion points at Working Group on CCS Business Act

The first meeting of the Working Group was held on September 12, 2025. Here is the outline of the document titled "Proposals regarding the CCS Business System" (by METI/MOE) (the "**Proposal Document**"), which was the main subject of discussions at the first meeting of the Working Group.

To begin with, the Proposal Document considers the relevant matters as separated into the following two phases: (1) grant of license of CCS business, and (2) approval of operation plan of CCS business, which is to be formulated by the CCS operator who already obtained the CCS license (i.e., the holder of the license of CCS business).

For the outline of each of the phases (1) and (2) above, please see the below chart:



Source:

https://www.meti.go.jp/shingikai/enecho/shigen nenryo/carbon management/ccs business system/pdf/001 05 00.pdf

The following is the major discussion points in the Proposal Document for each phase (1) and (2) above.

(1) Phase of License of CCS Business

With respect to the phase of license for CCS business, the CCS Business Act stipulates that METI will designate some areas with potential of reservoirs for CCS, and will select an operator who is capable of conducting the CCS business most appropriately, and then will grant the license for CCS business to such operator.

As one of the criteria to be met for grant of license for CCS business, the operator is required to demonstrate the "possibility of conducting stable storage of CO2", in addition to the other requirements such as its financial basis and technical capability.

The Proposal Document indicates that this requirement of the "possibility of conducting stable storage of CO2" must be examined from the viewpoint whether CO2 can be stored stably in light of the geological information of the envisaged shielding layer and reservoir.

Next, the Proposal Document suggests a possible procedure (i.e., protocol) for selecting appropriate storage sites with regard to the above requirement of the "possibility of conducting stable storage of CO2." Specifically, the Proposal Document suggests referring to the ISO27914 international standard. The Proposal Document suggests the following four (4) items in the standard of ISO27914:

- (i) **Site screening**: to select appropriate sites in terms of CO2 storage capacity, injection capability, containment capacity, etc.;
- (ii) **Site characterization**: to analyze and interpret the petrophysical properties of the shielding layer and reservoir at the storage site, and CO2 injection capability;
- (iii) **Modeling simulation**: interpretation of geological models, CO2 flow simulation, etc.; and
- (iv) **Risk management**: identifying, analyzing, and assessing the relevant risks.

(2) Phase of Operation Plan of CCS

With respect to the phase of the Operation Plan of CCS), the CCS Business Act stipulates that a licensed CCS operator must prepare an Operation Plan of CCS operation, and obtain approval from METI on it beforehand.

With regard to this point, the Proposal Document specifically discusses the following five (5) items that the CCS operator must include in the Operation Plan:

- (i) **Methods to ensure stable storage**: The Proposal Document proposes requiring the following two (2) points in consideration of the characteristics of CCS projects: (1) matters of "geological assessment" and (2) matters of "operational planning". In respect of (1) "geological assessment", the Proposal Document sets out, as the items to be further considered, site characterization, modeling, risk management, and monitoring, by following ISO2794.
 - As for (2) "operational planning", the Proposal Document lists out the following items: well drilling and repair plans, CO2 injection plans, and decommissioning.
- (ii) **Monitoring**: The Proposal Document refers to the monitoring obligation of the CCS operator as provided under the CCS Business Act. In this regard, it further proposes the specific objects and methods of such monitoring obligation, as divided into the following three (3) patterns: "normal conditions", "critical conditions", and "abnormal conditions". The Proposal Document lists the target items of monitoring, such as CO2 composition, flow rate, and concentration, temperature and pressure, well integrity, subsurface shaking, location and range of CO2, and the situation of marine environment and land.
- (iii) Requirements for storing CO2 in the sea areas: The Proposal Document discusses the requirements that should be established under the CCS Business Act, by referring to the current requirements under the Act on Prevention of Marine Pollution and Maritime Disaster¹ as follows: CO2 separation and recovery methods, and CO2 concentration standards, etc. Specifically, the Proposal Document suggests that the separation and recovery methods not be limited to chemical reactions with amines, and that the concentration of CO2 be 99vol% or higher.
- (iv) **Measures to prevent leakage**: The CCS Business Act requires immediate emergency measures if the injected CO2 leaks out or is likely to leak out. In this regard, the Proposal Document suggests that a plan for emergency measures

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¹ The Act on Prevention of Marine Pollution and Maritime Disaster is the only law concerning underwater CCS business, and it will be abolished upon the full enforcement of the CCS Business Act.

- should be formulated in advance, by following the relevant requirement under the current Act on Prevention of Marine Pollution and Maritime Disaster.
- (v) **Assessment of the impact of CO2 leakage**: The Proposal Document suggests that certain pre-assessment of the impact in case of CO2 leakage be made, by referring to the survey items and methods of the Tomakomai CCS Demonstration Project².

3. Conclusion

As described above, it can be seen that the specific discussions, including technical aspects, are in progress by the government with a view to the full enforcement of the CCS Business Act to come. Following these concrete discussions, the related cabinet orders and ministerial ordinances as relevant to the full enforcement of the CCS Business Act will be formulated. I will continue to pay close attention to the progress of such discussions by the government and the development of the legal system based on the discussions.

² In the Tomakomai CCS Demonstration Project, water quality, current condition, and seabed environment (e.g., marine life and ecosystem) are indicated as the required investigation items for the impact assessment of CO2 leakage.

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