

Japan

NEWLY ENACTED LAW FOR CCS PROJECTS IN JAPAN

^④ Carbon capture and storage;
Japan

Abstract

A new law named the Act on Carbon Capture and Storage Business (CCS Business Act), has been approved and formulated by the regular session of the National Diet of Japan as of 24 May 2024. This new law for CCS projects is one of the outcomes of discussions by the Japanese Government towards the commercialisation of CCS projects over the next few years with a view to achieving the goal of becoming “carbon neutral”. The Ministry of Economy, Trade and Industry (METI) has led the discussions for formulating and enactment of the CCS Business Act by referring to precedents overseas such as in the EU and UK. This article provides a summary of the major provisions of this new law together with some background information.

1. Introduction

As the starting point for the overall aspects of CCS projects in Japan, the Sixth “Strategic Energy Plan” formulated by the Japanese Government in 2021 is referred to, which is the latest version of the Strategic Energy Plan of Japan. That plan specifies the CCS project as a key component essential for Japan’s plan to achieve its goal of “carbon neutrality” by 2050, as set out below:

“The Japanese government will proceed with the establishment of CCS technology and its cost reduction for CCS, as well as the development of suitable sites for CCS and the creation of an environment for the monetization of CCS. To this end, a long-term roadmap needs to be formulated and shared with stakeholders. In order to establish CCS technology and reduce the costs thereof, we will conduct research and development of technology to separate and capture CO₂, as well as its verification. We will also promote research and development for technology for the storage of CO₂, automation of monitoring of storage of CO₂, as well as cost savings for drilling, storage and monitoring of CCS. The Japanese government also plans to conduct a demonstration test of transporting liquefied CO₂ by ship, with the aim of implementing

a low-cost and efficient CCS framework. Furthermore, we will work together with the public and private sectors to build a model basis for the reuse of CO₂ and network optimization between CO₂ storage sites. In addition, for the purpose of development of suitable sites for CCS projects, we will promote the evaluation of the potential of storage layers and other relevant studies, by taking into account economic efficiency and social acceptability. Overall, by referring to movements in overseas CCS projects, we will promote the development of an environment for the monetization of CCS in Japan.”

Upon the background information up to the formulation of the new law of CCS Business Act of Japan, then this article sets forth the outline of the new law of CCS Business Act as follows.

2. Outline of the CCS Business Act

(1) Legal entitlement to do CCS and criteria for grants

The following are the basic concepts and structures as provided under the new law of the CCS Business Act in respect of the storage of CO₂:

(a) Two sets of CO₂ Storage Rights

The following are the important definitions of the rights in the context of CCS business under the CCS Business Act:

- (i) “CO₂ Storage Rights” means the rights to install and operate storage facilities in a storage complex within a storage site, and to store CO₂ in the storage complex.
- (ii) “Prospecting Rights” means the rights to install and operate the relevant storage facilities for prospecting purpose, *where*: the term “Prospecting” means excavating an underground stratum in order to investigate whether the stratum corresponds to a storage complex. “Prospecting” includes collecting sandstone and other rocks, but does not include the storage of CO₂ itself.

On the basis of the above two types of rights for CCS business, the followings are the effects of the granting of such rights:

- only a holder of CO₂ Storage Rights (a CO₂ Storage Operator) is authorised to engage in the CO₂ storage business in a storage complex underground; and
- only a holder of a Prospecting Right (an Operator of Prospecting) is authorised to engage in the prospecting business. To avoid of doubt, an Operator of Prospecting is not authorised to carry out the storage of CO₂ on permanent basis.

(b) Nature of CCS storage rights and prospecting rights

As per the provisions under the CCS Business Act, a CO₂ Storage Right and a Prospecting Right are both considered as real estate, and therefore, the provisions of the Civil Code of Japan applied to real estate shall apply *mutatis mutandis* to the CO₂ Storage Right and the Prospecting Right. As such, a holder of CO₂ Storage Right or a Prospecting Right will be given an exclusive authority to dig out the relevant Specified Area.

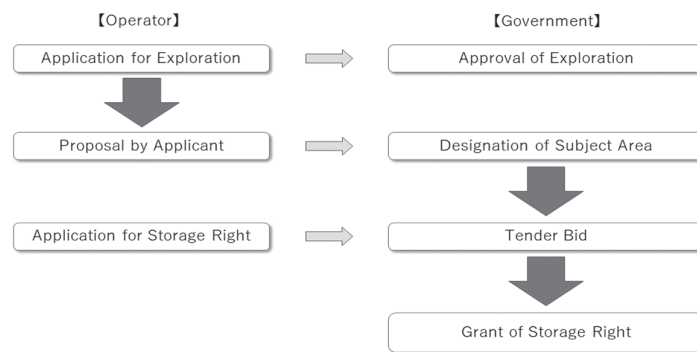
CO₂ Storage Rights can be the subject of a mortgage. CO₂ Storage Rights or Prospecting Rights cannot be transferred without METI approval. In addition, CO₂ Storage Rights cannot be waived, if injection of CO₂ has already been commenced.

(c) Process of creation of CO₂ Storage Rights

In the new CCS Business Act, in principle, the areas where there are storage complexes, or where they are likely to be storage complexes, will be specified as “Specified Areas” thereunder. This system is similar to the current regime under the Mining Act in respect to mining rights related to Specified Minerals (Mining Act art.38).

Under this “Specified Areas” regime, upon METI’s designation of a Specified Area and the associated public offering, the (potential) CCS business operators will apply for CO₂ Storage Rights or Prospecting Rights in respect of such Specified Area, upon which, METI will review the applications and select the most appropriate business operator for CCS for such Specified Area.

The procedure described above up to the granting of rights regarding CO₂ Storage Rights largely follows previous discussions within METI (see the diagram below). The procedure from application until the granting of the CO₂ Storage Rights is illustrated as follows:



Source: Page 16 of the Blueprint Document of “CCS Business Act (Tentative Title)”, dated March 2023

(d) Criteria for granting “CO₂ Storage Rights”

The criteria for the granting of CO₂ Storage Rights or Prospecting Rights in a Specified Area under the new CCS Business Act almost exactly follows the criteria formulated pursuant to previous discussions by METI. Specifically, an applicant is required to demonstrate that it has sufficient financial basis and technical ability to conduct the CCS business, and that it has no past record of any violations of the relevant laws.

Furthermore, the requirements for the granting of the CO₂ Storage Rights or Prospecting Rights are as follows: that the applicant can demonstrate that it will be able to ensure the stable storage of CO₂; and that the CCS operation will not hinder any other established storage sites and prospecting areas, as well as mining areas under a mining right (granted according to the Mining Act) held by any other person.

In addition, in order for the rights to be granted, the CCS project must not be contrary to the public interest, and there must not be any risks that it will be significantly inappropriate or hinder the promotion of public interest in light of other social and economic circumstances.

If the above criteria are met, which will be reviewed by METI, the relevant right, whether CO₂ Storage Rights or Prospecting Rights will be granted.

(e) CO₂ Storage Rights in areas other than specified areas

Furthermore, there is a special provision in the new CCS Business Act which is applicable to an existing mining rights holder under the Mining Law of Japan. A holder of a mining right in respect of oil, natural gas and the other

minerals to be specified by the cabinet order under the Mining Act may apply for a CO₂ Storage Rights or Prospecting Rights in respect of an area *other than* a Specified Area, if the conditions of the following paragraph are all met. This is a specialised treatment applicable to an existing mining right holder only.

The criteria for granting CO₂ Storage Rights or Prospecting Rights in this case, i.e. the application by a mining rights holder in respect of an area other than a Specified Area, are almost identical to those for the Specified Area; provided, however, that in addition to the criteria set out in (d) above, the following condition must be met: “There is a storage complex or there is likely to be a storage complex in the non-Specified Area, and it is necessary that such mining rights holder engages in the CCS business from the viewpoint of the promotion of public interest.”

(f) Duration of Prospecting Rights and Conversion to CO₂ Storage Rights

With respect to Prospecting Rights, unlike CO₂ Storage Rights, a statutory time limit is set, as expected based on previous METI discussions. In principle, the duration of a Prospecting Right is four years from the date of the grant thereof, which can be renewed for another two years. There are no limitations on the number of renewals of the period. Accordingly, a Prospecting Right can last for 10 years or more, insofar as each of the renewals for two years is approved by METI.

In addition, a holder of Prospecting Rights may apply for CO₂ Storage Rights when attempting to engage in the storage of CO₂ in the storage complex within the prospecting area, based on the prospecting situation in such prospecting area. In this regard, the criteria for granting the CO₂ Storage Rights are almost identical to those for granting of the CO₂ Storage Rights in the Specified Area.

(2) *Conduct of CCS business under CO₂ Storage Rights and Prospecting Rights*

Here is a summary of the relevant provisions under the CCS Business Act in respect of the operation phase of a CCS business.

(a) Obligation to commence the CCS operation and formulation of an operation plan

The CCS operators, whether holder of a CO₂ Storage Right or Prospecting Right, must start the operation of the relevant CCS business within a certain period of time to be determined by an ordinance of METI.

In addition, prior to the commencement of the operation of CCS, an operation plan must be formulated by the operator for approval by METI. The operation plan must be complied with by the operator throughout the operation of the relevant CCS business. Further, the operator must also regularly report the implementation status of the operation plan to METI.

(b) Monitoring of the storage complex and funding obligations

A CO₂ Storage Operator (for the avoidance of doubt, *excluding* an Operator of Prospecting) who has commenced operating a storage of CO₂ is required to monitor the temperature, pressure, and any other status of the CO₂ storage complex to be specified by an ordinance of METI. Furthermore, the CO₂ Storage Operator who has commenced the storage of CO₂ will have to

reserve certain amount of money to cover the monitoring costs and other expenses from the time it finishes injecting of CO₂ into the storage complex until the decommissioning of the site.

Furthermore, some monetary contributions will have to be deposited with the Japan Organisation for Metals and Energy Security (JOGMEC) in order to cover the costs necessary for JOGMEC to manage and monitor the storage site for CO₂ after the site's decommissioning (for details, please see (d) and (e) below).

(c) Measures to be taken in the case of CO₂ leakages

If a leakage of CO₂ stored in a storage complex within a storage site occurs, the CO₂ Storage Operator must immediately take emergency measures and give a summary report to the competent minister.

(d) Decommissioning of the storage site

If a CO₂ Storage Operator who has commenced the injection of CO₂ into the storage site plans to cease the CCS operation, the CO₂ Storage Operator must conduct the relevant measures to decommission the storage site. In this case, the operation of the CCS business will be discontinued upon the expiration of the period from the date of the last time of the injection of CO₂ into the storage complex until the time at which the storage status of the stored CO₂ becomes stabilised. Such period by which the CCS business may be discontinued will be determined as per the upcoming ordinance of METI.

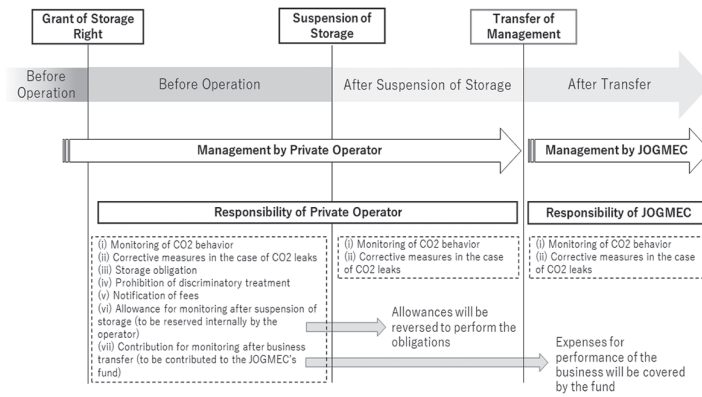
The decommissioning of the storage site will be approved by METI only if (a) the storage situation of CO₂ is stable and it is expected that it will continue to remain stable in the future; and (b) all monetary contributions to JOGMEC (please see (b) above) have been paid.

(e) Transfer of responsibility to manage the storage site

Once the decommissioning of the storage site has been completed as approved by METI, JOGMEC will be responsible for the monitoring and other management matters of such decommissioned storage site.

JOGMEC will manage the storage site to check if the CO₂ is stably stored in the storage complex. During such monitoring by JOGMEC, if a leakage of CO₂ occurs, JOGMEC must immediately take emergency measures and report a summary thereof to METI.

These concepts of monitoring activity by JOGMEC almost exactly follows METI's study results announced previously, which is illustrated as follows:



Source: Page 16 of the Draft of "Proposed Legal Regime for CCS Business", dated November 2023

(3) Security issues of CCS project sites

A CO₂ Storage Operator shall take the necessary measures with respect to: (a) the excavation of land for the CCS business; (b) the storage of CO₂ in a storage complex; and (c) the construction work of the CCS business etc. The Operator of Prospecting has similar obligations (with the exception of (b)).

The CO₂ Storage Operator or the Operator of Prospecting must maintain the storage facilities in accordance with the technical criteria to be stipulated by an ordinance of METI, and must report to METI in the event of occurrence of a disaster etc.

When installing or constructing storage facilities, the construction plans must be notified to METI. When the construction of such storage facilities is completed, the CCS operator must conduct a self-inspection of the structure before the storage facilities are put into the actual use.

(4) Land use rights for CCS sites

The CCS Business Act provides certain types of authorities will be granted to the holders of CO₂ Storage Rights or Prospecting Rights, so that such holders will be able to use or forfeit, as the case may be, the surface land as necessary for the CCS projects.

4. Final remarks

This article has summarised the material provisions in the CCS Business Act published on 24 May 2024. However, the practical implementation of such new law is still under discussion by the Government, and METI is working toward formulation of the relevant ordinance, a part of which is referred to above. One should watch out for such movement by METI, and also any progress in further discussions by the Japanese Government on CCS projects as overall.

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