

Unravelling the Legal Framework of Indonesia's Carbon Capture and Storage under Presidential Regulation No. 14 of 2024

In order to support the utilization of carbon capture and storage (“**CCS**”) potential in Indonesia, the government implemented Presidential Regulation No. 14 of 2024 regarding Implementation of Carbon Capture and Storage Activities (“**PR 14/2024**”) on 30 January 2024. Aligned with national contribution targets and the goal of achieving net zero emissions by 2060 or earlier, the regulation underscores the pivotal role of CCS technology in emission reduction. It also emphasizes Indonesia's substantial capacity for carbon storage, positioning the nation as a key hub for carbon capture at both national and regional levels. This strategic move aims to increase investment attractiveness and create economic value from the carbon capture, transport and storage business process, aligning with the regulation's stated considerations.

We outline several noteworthy provisions from PR 14/2024, as below:

Implementation Schemes

PR 14/2024 presents two schemes that are available for CCS implementation, as outlined below:

SCHEME	LOCATION	ORGANIZER
CCS Implementation in Mining Working Area	Mining Working Area	Contractor*) *) Contractor that carry out mining exploration and exploitation activities based on PSC
CCS Implementation in Carbon Storage License Area	Carbon Storage License Area	Exploration License Holder
		Storage Operation License Holder

CCS Implementation in Working Area

The implementation of CCS in Working Areas will be part of the oil operations based on the PSC, and will proceed only after the Contractor secures approval for the CCS implementation plan submitted to Special Task Force for Upstream Oil and Gas Business Activities (*Satuan Kerja Khusus Pelaksana Kegiatan Usaha Hulu Minyak dan Gas Bumi* or “**SKK Migas**”) or Aceh Oil and Gas Management Agency (*Badan Pengelola Migas Aceh* or **BPMA**) (specifically for Aceh region) as part of the field development plan approval request (Articles 4.1, 5 and 28.2 of PR 14/2024). The CCS implementation must be accompanied by carbon storage capacity certification, which will be further regulated by relevant Minister of Energy and Mineral Resources (“**MEMR**”) regulation.

After the MEMR approves the request, the next step is amending the PSC to include provisions for CCS, including specifying the Contractor's responsibility for CCS implementation (Articles 4.3, 7.1 and 7.2 of PR 14/2024). The amendment shall be requested for approval by the Contractor in writing to MEMR through SKK Migas, while specifically in Aceh, such request shall be submitted by the Contractor through BPMA. Subsequently, the Contractor may utilize depleted reservoirs or saline aquifers within its Working Area for CCS implementation.

CCS Implementation in Carbon Storage License Area

CCS implementation in Carbon Storage License Area based on Exploration License can be conducted by business entities or permanent business entities, whereas CCS operation

based on Storage The implementation of CCS based on Exploration License can be carried out by business entities or permanent business entities, while the implementation of CCS based on Storage Operation License can only be done by business entities (Articles 9.3 and 9.4 of PR 14/2024). Business entities refer to legal entities established and conducting continuous business activities within Indonesia, while permanent business entities refer to entities established outside of Indonesia, yet operating within Indonesia and subject to Indonesian laws (Articles 1.30 and 1.31 of PR 14/2024).

In this scheme, the designation or the determination of Carbon Storage License Area can be stipulated by MEMR or based on proposals from business entities or permanent business entities (Articles 10.1 and 10.2 of PR 14/2024). In cases where the Carbon Storage License Area overlaps with or is within the same area as the Working Area and/or mining business license area, preparation of the Carbon Storage License Area is conducted through collaboration in data utilization and/or joint utilization of surface facilities (Article 10.4 of PR 14/2024).

MEMR offers Carbon Storage License Areas to business entities or permanent business entities through limited selection (for areas proposed by them) or auction (for areas prepared by MEMR) (Articles 12.1, 12.3 and 12.5 of PR 14/2024). Afterward, MEMR will announce the awardee of the limited selection or auction and subsequently grant an Exploration License, that will be valid for 6 (six) years and could be extended once for a maximum of 4 (four) years, upon meeting the required administrative, technical, environmental, and financial requirements (Articles 15, 16 and 17.1 of PR 14/2024).

If the exploration activities establish the commercial potential of carbon storage capacity in the target injection zone, the Exploration License holder submits a Plan for Development and Operation, accompanied by carbon storage capacity certification, for the said zone to MEMR for approval (Articles 20.1 and 20.5 of PR 14/2024). The Exploration License holder, upon obtaining approval for the Plan for Development and Operation of the target injection zone from MEMR, is entitled to obtain a Storage Operation License upon fulfilling the requisite administrative, technical, environmental, and financial requirements (Articles 23.2 and 24.1 of PR 14/2024). Prior to conducting carbon storage operations, the Storage Operation License holder must submit and obtain MEMR approval for the annual work plan (Articles 26.1 and 26.2 of PR 14/2024).

CCS Operations and Closure

Below is a summary of the aspects of CCS implementation:

CCS IMPLEMENTATION	DESCRIPTION	REMARKS
CARBON CAPTURE	Carbon capture is conducted through (Article 29.1 of PR 14/2024): (a) carbon separation at oil and gas production facilities; (b) capture of carbon from combustion; (c) pre-combustion capture; (d) oxyfuel combustion capture; and/or (e) other methods in line with advancements in science and technology.	Carbon capture in the form of carbon dioxide can originate from the atmosphere using direct air capture technology (Article 29.2 of PR 14/2024).

<p>CARBON TRANSPORT</p>	<p>Carbon transport could be conducted using (Article 30.2 of PR 14/2024):</p> <ul style="list-style-type: none"> (a) pipelines; (b) trucks; (c) ships; and/or (d) other methods in accordance with advancements in science and technology. 	<p>Carbon transport activities may be carried out by business entities or Storage Operation License holders upon obtaining approval from the MEMR and/or the minister responsible for transportation affairs (Article 30.4 of PR 14/2024).</p> <p>Carbon transportation as part of CCS implementation by the Contractor within the same Working Area or between different Working Areas does not require a Carbon Transport License. However, if a Storage Operation License holder conducts carbon transportation, they must obtain a Carbon Transport License (Articles 32.1 and 33 of PR 14/2024).</p>
<p>CARBON INJECTION AND STORAGE</p>	<p>Carbon injection and storage can be performed in depleted reservoirs, saline aquifers, or coal seams (Article 34.4 of PR 14/2024).</p>	<p>Carbon injection and storage are conducted by Storage Operation License holders after obtaining environmental approval (Article 34.4 of PR 14/2024).</p> <p>Carbon storage capacity is prioritized for domestic carbon producers and Contractors as well as Storage Operation License holders conducting CCS must allocate 70% (seventy percent) of the total carbon storage capacity for domestic carbon storage and 30% (thirty percent) for carbon storage originating from abroad (Articles 35.1, 35.2 and 35.3 of PR 14/2024).</p>

Regarding the Closure plan for CCS operations, the Contractor through SKK Migas or Storage Operation License holder, submits the closure plan to MEMR (Article 36.3 of PR 14/2024). Closure occurs when: (a) carbon storage capacity in the target injection zone is full; (b) there is no more carbon injected; (c) the Storage Operation License period ends and is not extended; (d) the PSC period is ending and CCS management is not continued; (e) unsafe conditions necessitate temporary cessation and closure of CCS activities as the best option; (f) force majeure conditions require closure of CCS activities as the best option; or (g) it is no longer economically viable based on the Contractor's or Storage Operation License holder's economic study (Article 36.1 of PR 14/2024).

Business Scheme

For storage fees, Contractors' revenue from monetization is subject to taxation regulations governing the upstream oil and gas business, while storage fees obtained by Storage Operation License holders incur non-tax state revenue obligations (royalties) payable to the government which further detailed in ministerial regulations (Articles 42.2 and 42.3 of PR 14/2024). In terms of CCS implementation incentives, Contractors may receive tax

incentives as per taxation regulations governing upstream oil and gas activities along with non-tax incentives, while holders of Exploration License, Carbon Transport License, and/or Storage Operation License may also be eligible for both tax and non-tax incentives (Article 43 of PR 14/2024). Regarding assets in CCS operations, all goods and equipment purchased by the Contractor and directly used in CCS operations as part of the PSC become state-owned assets managed, while all goods and equipment purchased by Storage Operation License holders become the property of the license holder (Article 44 of PR 14/2024).

Cross-Border Transportation of Carbon Mechanism

In the realm of facilitating cross-border CCS transportation, such endeavour may be carried out through the establishment of bilateral cooperation agreements between nations (Article 45 of PR 14/2024). Bilateral cooperation agreements guide the parties to issue recommendations or permits required for transboundary Carbon Transport. The agreement must take into account international rules regarding cooperation in order to mitigate climate change (Article 46.1 of PR 14/2024).

Carbon transported into the customs territory of Indonesia shall undergo a singular registration process by the importer at the point of initial importation (Article 47.2 of PR 14/2024). It is important to emphasize that transporting carbon is permissible solely after the execution of a bilateral agreement between Indonesia and the nation wherein the carbon was produced and captured (Article 47.3 of PR 14/2024). In the occurrence of a leakage incident during the transportation of carbon within the territory of Indonesia, it is important to note that such leakage will not contribute to Indonesia's greenhouse gas inventory (Article 47.4 of PR 14/2024).

Measurement, Reporting and Verification Mechanisms

Mitigation actions for climate change resulting from CCS activities are conducted through stages of measurement, reporting and verification (Article 48.2 of PR 14/2024). Measurement is carried out at least once per year and conducted on the planning and implementation of CCS activities, which must include at least carbon inventory during the activities and CCS operational parameters (Articles 49.1 and 49.2 of PR 14/2024).

Reporting involves preparing mitigation action achievement reports, which encompass interconnected processes, from carbon separation and capture from emission sources (flue gas) to the transportation of captured carbon to storage locations and carbon storage in secure locations, including the drafting of mitigation action plans and implementation reports (Articles 50.1 and 50.2 of PR 14/2024).

For quality control of reporting outcomes, validation and verification are conducted. Contractors or license holders may appoint independent bodies registered in the national climate change control registry for this purpose (Articles 51.1 and 51.2 of PR 14/2024). The results of measurement, reporting, and verification implementation are reported into the national registry system by the relevant Contractor or Storage Operation License holder (Article 53 of PR 14/2024).

Safety, Environmental and Emergency Response Mechanisms

In the context of safeguarding worker safety, plant and equipment safety, environmental safety, and public safety, it is incumbent upon the Contractor or Storage Operation License holder to execute the monitoring function. The monitoring function shall be undertaken from the approval of the CCS implementation plan until a period of 10 (ten) years subsequent to the finalization of the closure of CCS activities (Article 57 of PR 14/2024).

Moreover, the Contractor or Storage Operation License holder is obligated to provide an emergency response system designed to address hazardous conditions that may pose a potential threat to worker safety, plant and equipment safety, environmental safety, and/or public safety. The emergency response system, as herein mentioned, encompasses, at a minimum, the following: (a) risk assessment; (b) emergency response procedures; (c) emergency response equipment, including early warning equipment; (d) educated and trained personnel; and (e) periodic training (Articles 62.1 and 63 of PR 14/2024).

Supervision and Imposition of Sanctions

The execution of CCS in connection with the Nationally Determined Contribution and the enforcement of the Carbon Economic Value (*Nilai Ekonomi Karbon* or “**NEK**”) governance is conducted and overseen by the Ministry of Environment and Forestry. In the realm of business licensing for electronic and integrated implementation of CCS, supervisory and regulatory responsibilities fall under the purview of the Ministry of Investment/ the Investment Coordinating Board. Meanwhile, the formulation of foreign policy regarding CCS cooperation at the international level is coordinated by the Ministry of Foreign Affairs (Chapter XII PR 14/2024).

The Exploration License holder, Storage Operation License holder, Contractor and Carbon Transport License holder will be subject to administrative sanctions in the event that they commits several technical violations as stipulated under Chapter XIII of PR 14/2024.

The stages of administrative sanctions that are regulated are as follows (Articles 74.4 and 75.2 of PR 14/2024):



Further provisions regarding the procedures for the imposition of administrative sanctions shall be regulated in a MEMR Regulation.

Effective Date

PR 14/2024 starts to become effective on 30 January 2024 and upon its commencement, all laws and regulations related to CCS implementation are deemed to remain in effect as long as they are not contradictory to the provisions of this regulation.

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