

# Ashurst OSP

## Indonesia issues further regulations for CCS and CCUS deployment – A quick guide to Presidential regulation 14/2024 and SKK Migas regulation PTK-070

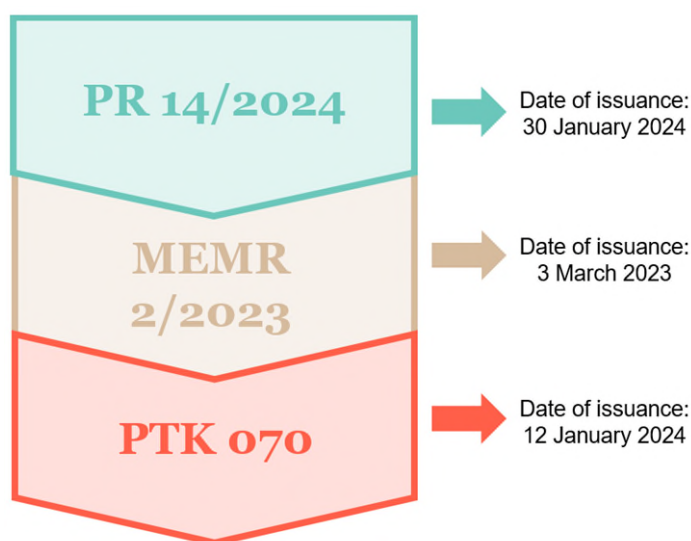
February 2024

### Background

Following the issuance last year of an initial regulation on Carbon Capture and Storage (**CCS**) and Carbon Capture Utilization and Storage (**CCUS**) for Upstream Oil-and-Gas Business Activities (**MEMR 2/2023** – see our previous article [here](#)), the Indonesian government recently issued a much broader overarching framework on the Organization of CCS Activities (**PR 14/2024**) which came into force on 30 January 2024.

Recognizing the role of CCS technology in mitigating carbon emissions from certain "hard to abate" sectors (such as oil & gas, steel, cement and other heavy industries) and Indonesia's vast geological potential, the regulation provides a framework for CCS activities and projects to be implemented across the Indonesian archipelago. PR 14/2024 lays out licensing requirements and the process to award rights over CCS work areas from exploration to end-of-life. It also opens the door to cross-border transportation and the storage of CO<sub>2</sub> generated outside Indonesia (albeit limited to a maximum of 30% of the relevant storage work area capacity).

Besides PR 14/2024 which is meant to act as the umbrella regulation for CCS in Indonesia, a further technical regulation<sup>1</sup> on the Implementation of CCS and CCUS in Oil & Gas Work Areas (**PTK-070**) has also recently been issued by the Special Working Unit for the Organization of Upstream Oil-and-Gas Business Activities (**SKK Migas**). PTK-070 is an implementing regulation of MEMR 2/2023 providing additional details on procedures and requirements for upstream oil and gas contractors engaging in CCS/CCUS within their designated Work Areas.



<sup>1</sup> PTK-070/SKKIA0000/2024/S9.

# 1. Overview of PR 14/2024

## **Summary:**

PR 14/2024 is a substantial and detailed regulation spanning 77 articles.

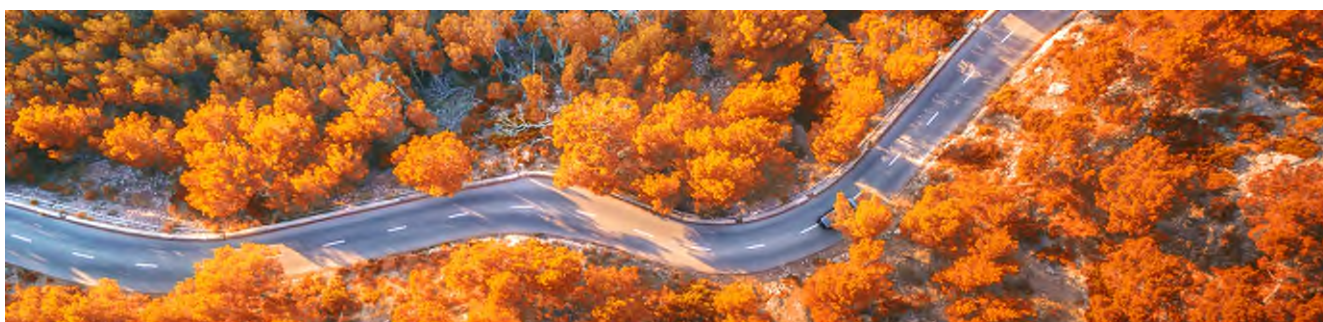
The main areas of coverage of PR 14/2024 are as follows:

- Implementation of CCS activities based on cooperation contracts;
- Carbon Storage Permit Areas and the tendering process for awarding such areas;
- CO2 exploration, storage and transport stages;
- Closure of CCS activities;
- CO2 storage capacity for domestic needs;
- Ownership of CCS assets;
- Cross-border transportation of CO2;
- Business schemes for CCS activities;
- Incentives available for CCS projects;
- MRV;
- Environmental and safety requirements; and
- Sanctions.

## **Key concepts:**

PR 14/2024 introduces certain concepts which are used throughout the regulation and define its scope of coverage:

- Carbon<sup>2</sup> (**CO2**) is defined as carbon dioxide (CAS 124-38-9) with certain concentration specifications originating from emissions captured and processed using various technologies by observing good engineering standards and principles, originating from upstream oil and gas business activities, power generation, industry, and other emission producing activities produced domestically or abroad with the aim of being injected into an injection target zone.
- Injection Target Zone<sup>3</sup> (*zona target injeksi* or **ZTI**), is defined as a rock system in a geological formation consisting of storage zone layers, buffer zone layers, impermeable zone layers and geological traps that are able to accommodate injected CO2, safely and permanently while meeting environmental safety standards.



<sup>2</sup> Article 1(2) of PR 14/2024.

<sup>3</sup> Article 1(4) of PR 14/2024.

## 1.1 Implementation of CCS based on Cooperation Contracts

The procedure for **implementation of CCS activities in Oil & Gas Work Areas by contractors based on cooperation contracts (PSCs)** with SKK Migas or the Aceh Migas Organizational Body (*Badan Pengelola Migas Aceh* or **BPMA**)<sup>4</sup> is described in Articles 4-8 of PR 14/2024. These provisions are aligned with the framework previously set out in MEMR 2/2023, which preceded the issuance of PR 14/2024 and was focusing on the implementation of CCS/CCUS by contractors in the upstream oil & gas sector. Please refer to our [previous article](#) for an overview of the implementation of CCS based on PSCs.

## 1.2 Carbon Storage Permit Areas

Separately from the regime for contractors based on PSCs, CCS activities may also be conducted by other parties in "Carbon Storage Permit Areas" which consist of:<sup>5</sup>



**Business entities incorporated in Indonesia or Permanent Establishments<sup>6</sup> can propose Carbon Storage Permit Areas to MEMR<sup>7</sup>** who in turn prepares and determines the Carbon Storage Permit Areas by conducting (i) an initial risk evaluation and (ii) a review of relevant technical data on the Carbon Storage Permit Area.

If a proposed area is overlapping or within an area under a mining business license or oil & gas work area, MEMR shall conduct the **initial risk and technical evaluation** by obtaining data through data utilization cooperation or joint utilization of surface facilities.<sup>8</sup>

Carbon Storage Permit Areas are offered to business entities / Permanent Establishments through either:		
	<b>Limited selection</b>	<b>Note:</b> Limited selection will be conducted for Carbon Storage Permit Areas that have been proposed by business entities / Permanent Establishments. The entity that made the proposal will be given the right to match the highest bid.
	<b>Auction</b>	

<sup>4</sup> Depending on the location of the Work Area.

<sup>5</sup> Article 9, PR 14/2024.

<sup>6</sup> Article 1(21) of PR 14/2024 defines Permanent Establishments as business entities that are established and incorporated outside of the territory of Indonesia which carry out activities within the territory of Indonesia and are obliged to comply with the laws and regulations that are prevailing in Indonesia.

<sup>7</sup> Article 10, PR 14/2024.




<sup>8</sup> Article 10, PR 14/2024.

In the event that there is potential for CCS in an Oil & Gas Work Area that is **not exploited** by the contractor, then<sup>9</sup> any of its affiliates or a third-party business entity or Permanent Establishment, can propose such area to MEMR to be designated as a Carbon Storage Permit Area.

If such area is subsequently accepted and "determined" as a CCS area by MEMR<sup>10</sup>, it may then be offered to business entities or Permanent Establishments through a **limited selection process**.

On the other hand, PR 14/2024 implies that for Carbon Storage Permit Areas offered directly by MEMR an **auction process** will be implemented.

In order to participate in a limited selection or auction, business entities/Permanent Establishments<sup>11</sup> must fulfil the following cumulative conditions:

	technical capabilities related to upstream oil and gas, mining, or geothermal
	technical capabilities related to the management of hazardous and toxic materials
	financial capacity to carry out exploration activities in ZTI and/or carbon storage operations in the Carbon Storage Permit Area

### 1.3 Permitting

The implementation of CCS in Carbon Storage Permit Areas requires the following **2 permits** issued by MEMR: <sup>12</sup>

- Exploration Permit
- Storage Operation Permit

#### 1.3.1 Exploration Permit

The winner of the limited selection or auction for the Carbon Storage Permit Area is granted an Exploration Permit by MEMR after submitting an application. <sup>13</sup> through the national electronic business licensing system (referred to as **OSS** or online single submission).

<sup>9</sup> Article 13, PR 14/2024.

<sup>10</sup> Article 14, PR 14/2024.

<sup>11</sup> If the participant is in the form of a consortium, they must have a consortium agreement which includes the allocation of which business entity/Permanent Establishments are the operator (i.e. the entity that will represent the consortium in communication and coordinating on behalf of the consortium).

<sup>12</sup> Article 3 & Article 9, PR 14/2024.

<sup>13</sup> In the event that the winner of a limited selection or auction is a consortium, one of the consortium members can be appointed to be the operator representing the other consortium members or members can form a business entity or permanent establishment to hold the Exploration Permit.

Exploration Permits must at least contain provisions regarding the following aspects:

1	Identity of the business entity or Permanent Establishment that is granted the permit
2	Obligation to implement ZTI Exploration commitments
3	Work plan for implementing ZTI Exploration commitments
4	Guarantee of implementation of ZTI Exploration commitments
5	Procedures and requirements for submitting a ZTI Development and Operation Plan
6	Post-operation obligations for ZTI Exploration activities
7	Permit validity period
8	Obligation to deliver ZTI Exploration data obtained
9	Non-tax state revenue obligations to the Government
10	Supervision of permits by the Government

Exploration Permits are **valid for 6 years** and can be **extended** once for a maximum of 4 years. Exploration Permits cannot be transferred.<sup>14</sup>

Exploration Permit holders are required to submit a **work plan** covering the implementation of ZTI Exploration commitments and obtain approval from MEMR<sup>15</sup>.

If the ZTI's exploration activities establish the potential for commercial Carbon Storage capacity, the Exploration Permit holder may then submit a **plan for development and operation of the ZTI area** to MEMR.<sup>16</sup>

### 1.3.2 **Storage Operation Permit**

The implementation of CCS in the Carbon Storage Permit Area may only be carried out after the Business Entity obtains a Storage Operation Permit.<sup>17</sup>

Storage Operation Permits can **only** be granted to **business entities**. If an Exploration Permit holder is a Permanent Establishment, the Permanent Establishment must form a business entity incorporated in

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<sup>14</sup> Article 17, PR 14/2024.

<sup>15</sup> Article 18, PR 14/2023.

<sup>16</sup> Article 20, PR 14/2024.

<sup>17</sup> Article 28, PR 14/2024.



Indonesia to obtain the Storage Operation Permit, and the shares of such business entity must be entirely owned by the Permanent Establishment.<sup>18</sup>

Exploration Permit Holders who have obtained approval for the ZTI Plan for Development and Operation are entitled to a Storage Operation Permit. Application is submitted to MEMR through the OSS and the permit subject to the fulfillment of certain administrative, technical, environmental and financial requirements.<sup>19</sup>

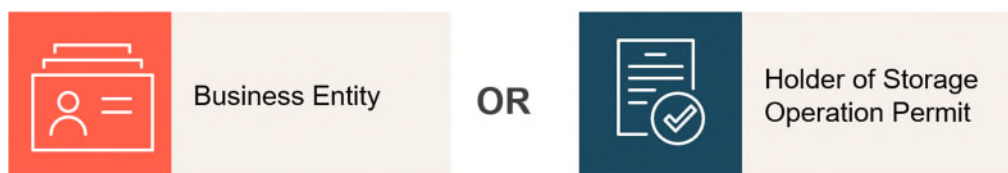
Storage Operation Permits are granted for a **maximum of 30 years** and can be **extended** for a maximum of 20 years taking into account the storage capacity in the Carbon Storage Permit Area.<sup>20</sup>

Holders of Storage Operation Permits are required to submit an **annual work plan** for the implementation of CO2 storage operation activities for approval by MEMR, prior to carrying out their operations.<sup>21</sup>

### 1.3.3 Carbon Transportation Permit

CO2 transportation business activities can be carried out pursuant to a **Carbon Transportation Permit**.<sup>22</sup>

CO2 transportation business activities can be carried out by:



after obtaining a **Carbon Transportation Permit** from MEMR and/or the Minister of Transportation (MOT):

1. Transportation by **pipe (not underwater)**: Carbon Transportation Permit granted by MEMR after the activity obtains its environmental approval;
2. Transportation by **underwater pipes**: Carbon Transportation Permit granted by MEMR after coordination with the Ministry of Maritime Affairs and Fisheries; and
3. Transportation by **trucks, ships and/or other methods**: Carbon Transportation Permit granted by MOT upon recommendation from the Ministry of Environment and Forestry (**MOEF**).

Carbon Transportation Permits are granted for **up to 20 years** (except for transportation by trucks, ships, and/or other methods which are granted for up to 10 years) and can be extended for a maximum of 10 years for each extension.<sup>23</sup>

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<sup>18</sup> Article 23, PR 14/2024.

<sup>19</sup> Article 24, PR 14/2024.

<sup>20</sup> Article 25, PR 14/2024.

<sup>21</sup> Article 26, PR 14/2024.

<sup>22</sup> Article 30, PR 14/2024.

<sup>23</sup> Article 31, PR 14/2024.



#### 1.4 Carbon Storage Capacity for Domestic Needs

An important feature of PR 14/2024 relates to the **prioritization of CO2 storage capacity for domestic CO2 producers**. Contractors and Storage Operation Permit holders who implement CCS activities are required to reserve **70% of their CO2 storage capacity** for CO2 from domestic sources.<sup>24</sup> Conversely, contractors and Storage Operation Permit holders can allocate **30%** of their CO2 storage capacity for the storage of CO2 originating from outside Indonesia. Importantly, storage of CO2 originating from abroad can only be carried out by **CO2 producers who invest and/or are affiliated with investments in Indonesia**. The regulation does not elaborate on the interpretation to be given to the reference to "investment or affiliation with investments in Indonesia" which can therefore (until further clarity is provided by way of implementing regulation or guidelines) be construed widely and could be tested in due course upon application to MEMR.

#### 1.5 Closure of CCS activities

Closure of CCS is to be carried out in the following circumstances:<sup>25</sup>

1	ZTI's Carbon Storage capacity is full
2	No more CO2 is injected
3	The term of the Storage Operation Permit expires and is not extended
4	The term of the Cooperation Contract will end, and CCS management will not continue
5	Unsafe conditions occur which cause temporary suspension and closure of CCS activities as the best option
6	Force majeure circumstances which cause the closure of CCS activities as the best option, OR
7	It is no longer economical based on the economic study of the contractor or Storage Operation Permit holder

<sup>24</sup> Article 35, PR 14/2024.

<sup>25</sup> Article 36, PR 14/2024.

Prior to closure, the contractor, through SKK Migas or the Storage Operation Permit holder, must submit a **CCS Activities Closure Plan** to MEMR. The Closure Plan must include at least the following information<sup>26</sup>:

- a. information on the subsurface up until the ZTI, equipment, installations, facilities and wells where the CCS activities have been closed;
- b. total CO<sub>2</sub> storage;
- c. cost estimation;
- d. timing of the closure;
- e. post-closure monitoring plan; and
- f. prevention plan to mitigate any: (i) environmental damage; (ii) danger to humans; (iii) damage to natural resources; and (iv) damage to equipment, installations and facilities, all as a result of the closure of CCS activities.

If MEMR approves the Closure Plan for CCS activities, the contractor or Storage Operation Permit holder shall carry out the closure of CCS activities in accordance with the approved closure plan. If on the other hand MEMR rejects the plan, the contractor or Storage Operation Permit holder shall have to make improvements to the plan in order to be able to close CCS activities.

Under MEMR 2/2023, the contractor may also return part of its Work Area to MEMR through SKK Migas or BPMA before the end of the PSC period where a depleted reservoir has carried out CCS or CCUS activities.

Of critical importance for potential developer-operators and investors, upon closure of the CCS activities or transfer of all or part of the Work Area to MEMR, **the supervision and responsibility for the depleted reservoir where CCS activities have been carried out will then be transferred to the State through MEMR and the Directorate General of Oil & Gas.**

## **1.6 Ownership of CCS Assets**

All goods and equipment purchased by contractors and used directly in the implementation of their CCS activities shall become state assets (*barang milik negara*), whilst on the other hand, holders of Storage Operation Permits shall retain ownership over goods and equipment related to CCS activities they acquire.<sup>27</sup>

## **1.7 Cross- Border Transportation of CO<sub>2</sub>**

In order to facilitate cross-border CCS transportation, **bilateral cooperation agreements** between countries may be concluded. Such cooperation agreements are to serve as a guideline for all parties to issue recommendations or permits required for cross-border CO<sub>2</sub> transport in accordance with the relevant laws and regulations in the respective countries.<sup>28</sup>

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<sup>26</sup> Article 36(4), PR 14/2024.

<sup>27</sup> Article 44, PR 14/2024.

<sup>28</sup> Article 45, PR 14/2024.



Every CO<sub>2</sub> transport activity into the Indonesian territory (referred to as the Indonesian customs area) must be carried out with means that meet safety, occupational health and environmental protection requirements.<sup>29</sup> CO<sub>2</sub> transported into Indonesia must be registered by the importer at the time of the first import in accordance with applicable customs and import regulations<sup>30</sup> with subsequent imports only requiring notifications.

Transportation of CO<sub>2</sub> from abroad for storage into the Indonesian territory can only be carried out after the entering into of a bilateral agreement between the Republic of Indonesia and the country where the CO<sub>2</sub> is produced and captured.<sup>31</sup> We anticipate that such bilateral agreements would address the **international law obligations of the Republic of Indonesia** and the other country that may have relevance to the relevant transboundary movement of CO<sub>2</sub>, including:

- the "**London Protocol**" (where the country producing and capturing the CO<sub>2</sub> is a party to the Protocol, noting that, in those circumstances, the country exporting the CO<sub>2</sub> is accountable for compliance with the Protocol, including establishment of a bilateral agreement or arrangement with the Republic of Indonesia that, at a minimum, provides the same environmental protections as would occur if Indonesia were a contracting party);
- the **UN Convention on the Law of the Sea** (especially Article 210 concerning regulation of pollution of the marine environment through dumping at sea); and
- the 1989 Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal or "**Basel Convention**" (to the extent that the CO<sub>2</sub> waste streams in question qualify as a "hazardous waste" under that Convention).

Importantly, in the event of a **leak during transportation** within the territory of Indonesia (including Indonesian waters), such leak must not add to Indonesia's greenhouse gas inventory.<sup>32</sup> This is likely to be an important consideration in negotiating agreements between the CO<sub>2</sub> producing party and the CO<sub>2</sub> storing party on how leakage is to be addressed, especially having regard to the fact that the existing 2006 IPCC Guidelines contemplate that Indonesia (as the storage state) should "report the amount of CO<sub>2</sub> imported, any emissions from transport and/or temporary storage (that takes place in Country B), and any emissions from injection and geological storage sites".<sup>33</sup>

The rights and obligations of parties involved in cross-border CO<sub>2</sub> transportation and handover, including the allocation of responsibilities in the event of a leak, are to be regulated under applicable laws and regulations as well as in accordance with the agreements in place between the various parties involved: emitters, Carbon Transportation Permit holders, Storage Operation Permit holders, and/or contractors.<sup>34</sup>

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<sup>29</sup> Article 47, PR 14/2024.

<sup>30</sup> Such as Law No. 10 of 1995 on Customs, as amended by Law No. 17 of 2006, Government Regulation No. 29 of 2021 on the Organization of the Trade Sector and Ministry of Trade (**MOTR**) Regulation No. 20 of 2021 on Import Policy and Provisions, as amended by MOTR Regulation No. 25 of 2022.

<sup>31</sup> Article 47, PR 14/2024.

<sup>32</sup> Article 47, PR 14/2024.

<sup>33</sup> 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Vol 2, Chapter 5, section 5.10.

<sup>34</sup> Article 47, PR 14/2024.



## 1.8 Business schemes

The implementation of CCS activities can be monetized through the imposition of **storage fees**<sup>35</sup>. For **Oil & Gas contractors**, there are also **other monetization opportunities** which we will discuss in Point 2.4 below. Storage fees obtained by Storage Operation Permit holders are **subject to non-tax state revenues (royalties)** which must be paid to the Government. Details on the amount of the storage fees will be set out in a Ministerial Regulation<sup>36</sup>. PR 14/2024 also provides that the tax treatment for the monetization of CCS activities by contractors shall comply with the existing laws and regulations applicable to upstream oil & gas activities.<sup>37</sup>

## 1.9 Carbon Economic Value

PR 14/2024 contains a brief reference to the concept of Carbon Economic Value and that each party undertaking CCS activities is required to record and report the implementation of Carbon Pricing through CCS activities in the **National Registry System for Climate Change Control** (*Sistem Registrasi Nasional Pengendalian Perubahan Iklim* or SRN PPI)<sup>38</sup>.

Carbon Pricing is regulated in Indonesia through Presidential Regulation No. 98 of 2021 on the Implementation of Carbon Pricing for the Purpose of Achieving Indonesia's Nationally Determined Contribution and the Control of Greenhouse Gas Emissions in National Development (**PR 98/2021**) and Ministry of Environment and Forestry Regulation No 21 of 2022 on the Guidelines for the Implementation of Carbon Pricing (**MOEF 21/2022**). Please refer to our previous client alert on this topic: ["Regulatory Overview of Carbon Pricing and Trading in Indonesia"](#).

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<sup>35</sup> Article 42, PR 14/2024.

<sup>36</sup> Article 42(6), PR 14/2024.

<sup>37</sup> For Normal PSCs, the tax regime shall follow Government Regulation No. 79 of 2010, as amended, whereas for Gross Split PSCs, the tax regime shall follow Government Regulation No. 53 of 2017, as amended.

<sup>38</sup> Article 54, PR 14/2024.

## 1.10 Incentives

Contractors, Exploration Permit holders, Storage Operation Permit holders and/or Carbon Transportation Permit holders may be granted **tax and non-tax incentives** in order to support the implementation of CCS<sup>39</sup>. These incentives shall be granted in accordance with the prevailing regulations, for example the import duty tax holiday provided under Minister of Finance (**MOF**) Regulation No. 176/PMK.011/2009, as amended by MOF Regulation No. 188/PMK.010/2015.

It would be beneficial for the GOI and MOF to further clarify the exact tax and non-tax incentives available for CCS as the reference to prevailing regulations seems to indicate that no specific incentives are available to kick-start the industry whereas:

- other countries in the region which are also looking to develop CCS hubs are offering substantial incentives to attract investments, such as Malaysia, which offers (among others) a tax allowance of 100% of qualifying capital expenditure which can be set-off against up to 100% of business statutory income for a period of 10 years; and
- incentives are critical at this early stage of the development of the industry where the commerciality and profitability of CCS deployment is challenging especially if there are not any or insufficient disincentives to CO<sub>2</sub> emissions (such as the implementation of a meaningful carbon tax).

## 1.11 Divestment / Sell-down

PR 14/2024 **restricts the transfer of the main licenses for CCS activities**<sup>40</sup>. The regulation also provides that the majority of shares in a Business Entity holding:

- an Exploration Permit can only be transferred after the business entity/permanent establishment has implemented all the commitments for ZTI Exploration and subject to MEMR approval; and
- a Storage Operation Permit can only be transferred after obtaining approval from MEMR, who will consider the sustainability of permanent and safe Carbon Storage operations in accordance with the provisions set out in the Storage Operation Permit.

## 1.12 Sanctions

PR 14/2024 imposes administrative sanctions for failures to comply with its requirements, including violations against the prohibition to transfer the Exploration Permit or Storage Operation Permit, and/or failure to comply with reporting obligations.<sup>41</sup> These sanctions can be in the form of:

- Written reprimand;
- Temporary or complete suspension of ZTI exploration, carbon storage operations or carbon transportation activities; and/or
- Revocation of permits.

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<sup>39</sup> Article 43, PR 14/2024.

<sup>40</sup> Further details on the transfer of shares in business entities/permanent establishments holding CCS permits will be set out in a Ministerial regulation.

<sup>41</sup> Article 74 & 75, PR 14/2024.

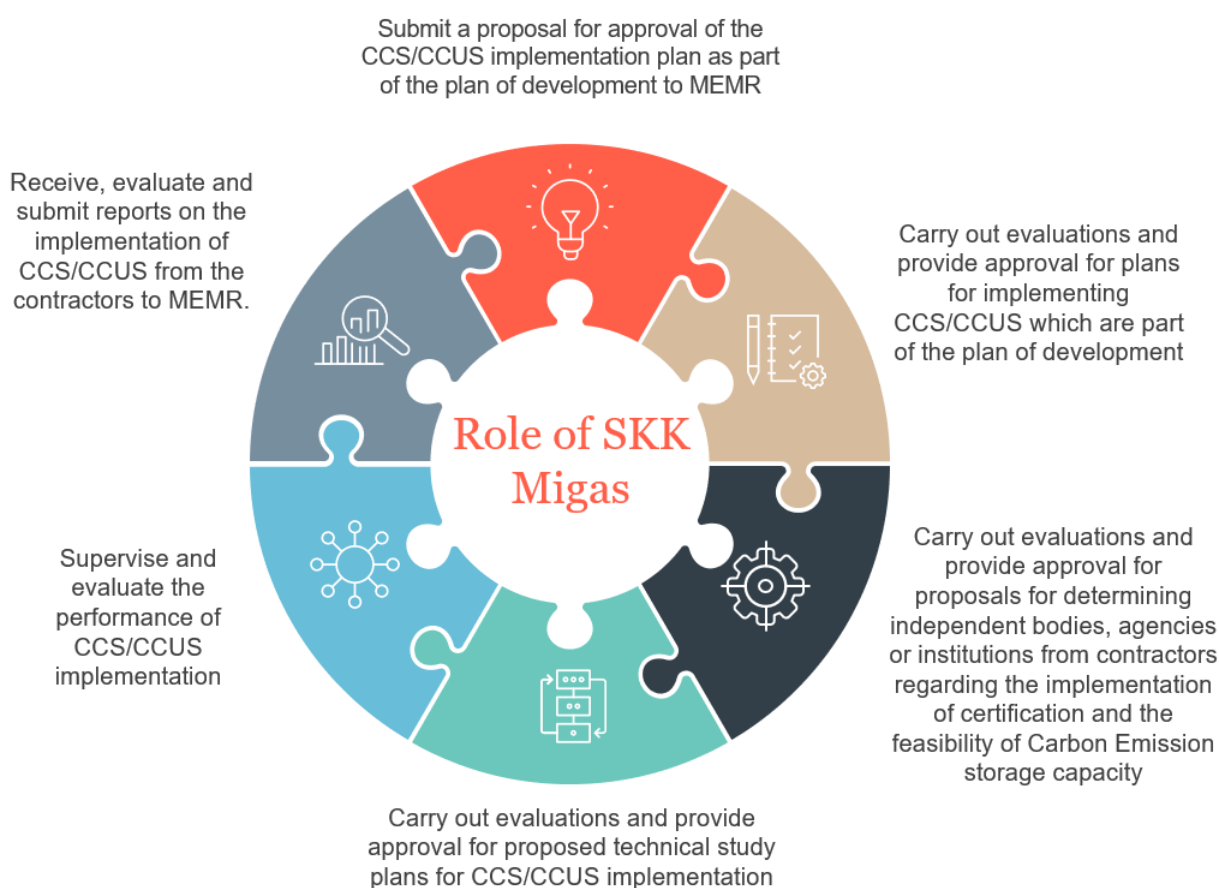
## 2. Snapshot of PTK-070

PTK-070<sup>42</sup> regulates the implementation of CCS & CCUS activities by oil & gas contractors providing guidelines for the contractors to apply throughout each stage of carrying out their activities. It is a technical regulation issued by SKK Migas which applies to upstream oil & gas contractors (**Contractors**) who undertake CCS/CCUS activities in their Work Area. In this section, we provide an overview of the main provisions and requirements of PTK-070.

### 2.1 Prerogatives and Obligations of Key Stakeholders

**SKK Migas** is responsible for carrying out control, supervision, as well as evaluation and approval of work plans and budget for the implementation of CCS/CCUS activities in the Work Area by the Contractors<sup>43</sup>.

The chart below provides an overview of SKK Migas' main prerogatives in relation to CCS/CCUS activities:



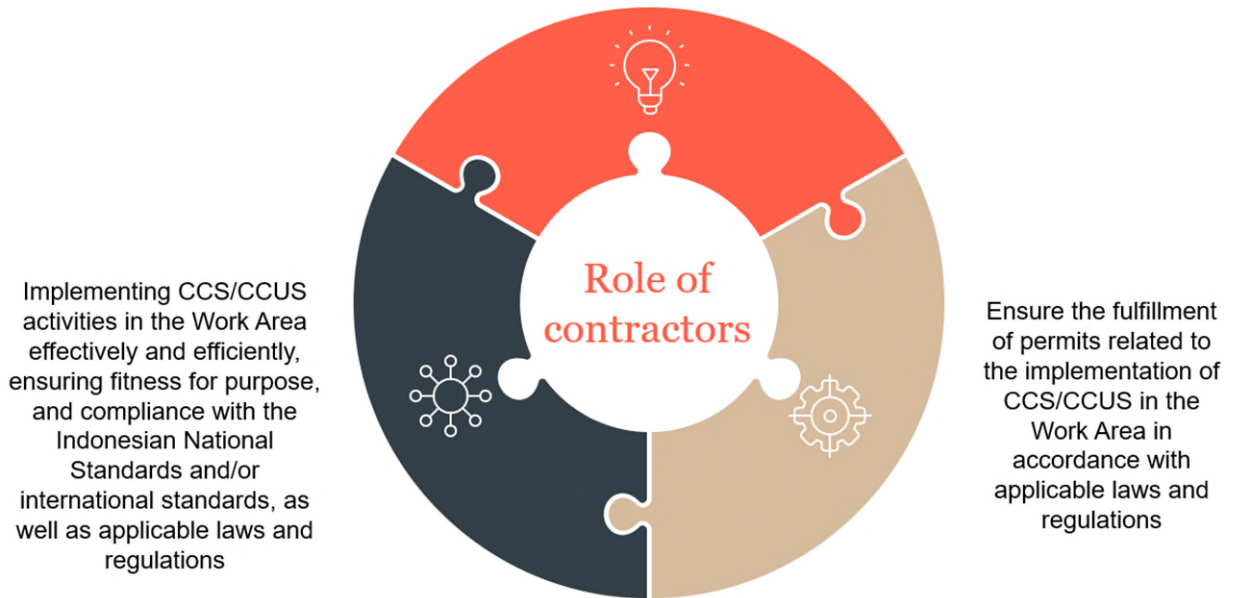
<sup>42</sup> PTK-070 was issued by SKK Migas hence, it only applies to those Work Areas within the jurisdiction of SKK Migas (and not those within the jurisdiction of BPMA in offshore Aceh). It is unclear if the BPMA will issue its own regulation on the implementation of CCS.

<sup>43</sup> Chapter II Article 2.1, PTK-070.



**Contractors** are responsible for the actual implementation of CCS/CCUS activities within their respective Work Areas which includes planning, evaluation, implementation, monitoring, Measurement, Reporting and Verification (**MRV**) and closure<sup>44</sup>.

Submitting proposals to SKK Migas, including the plan of development, authorization for expenditures (**AFE**), work program & budget (**WP&B**), related to the implementation of CCS/CCUS in the Work Area



## 2.2 Implementation of CCS/CCUS in Work Areas

Prior to the implementation of the CCS/CCUS activities, Contractors must first identify the CCS/CCUS system and boundaries by clearly identifying the sources of CO<sub>2</sub>. Contractors may carry out CCS/CCUS originating from the capture of CO<sub>2</sub> originating from other industries (than upstream oil & gas) with the approval of SKK Migas<sup>45</sup>.

In the event that the source of emissions comes from upstream oil and gas activities, the source of carbon emissions can come from:



Separation of CO<sub>2</sub> from the hydrocarbons produced throughout the oil & gas production activities; and/or



Pre-combustion and post-combustion capture.

<sup>44</sup> Chapter II Article 3.1, PTK-070.

<sup>45</sup> Chapter III Article 1.6, PTK-070.



In the event that the CO<sub>2</sub> is **sourced from other industries**, the contractor must conduct a feasibility study jointly with the CO<sub>2</sub> emitter/supplier to ensure the feasibility and availability of CO<sub>2</sub>.<sup>46</sup>

Contractors may use new wells or converted old wells for the implementation of CCS/CCUS<sup>47</sup> and the CO<sub>2</sub> may be stored in saline aquifers or depleted reservoirs (these saline aquifers and depleted reservoirs are natural resources owned by the State). Contractors must collect data on the potential CO<sub>2</sub> ZTIs, which includes conducting geological, geo-mechanical, geo-physical, reservoir and production engineering studies and pilot projects (if required) to initial test and develop CCS/CCUS technology on a small scale.<sup>48</sup>

### 2.3 **Monitoring and MRV**

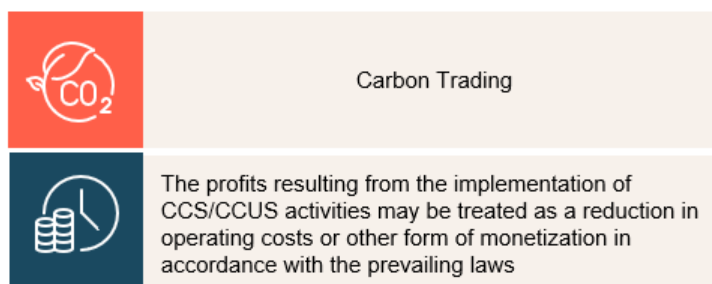
Monitoring and MRV are to be carried out at every stage of the process (from capture to closure) to ensure that CCS/CCUS activities are carried out safely, effectively and efficiently.<sup>49</sup> Monitoring and MRV should also aim at ensuring that GHG emissions are reduced and CO<sub>2</sub> is permanently stored in accordance with the storage plans approved by SKK Migas. Contractors are obliged to carry out MRV of mitigation actions (i.e. through permanent CO<sub>2</sub> capture and storage) for CO<sub>2</sub> emission reduction claims in order to support Indonesia's National Determined Contributions (NDCs) and Net Zero Emission (NZE) target achievements.

Contractors are to report their GHG emissions reduction activities to SRN PPI, which is a web-based data and information management system on actions and resources for climate change mitigation, climate change adaptation, and carbon economic value managed by MOEF. The report must include the amount of CO<sub>2</sub> captured, transported and stored.

Contractors are required to set aside the costs of monitoring activities to cover a period of 10 years after completion of the closure of CCS/CCUS activities.<sup>50</sup> Such funds for monitoring activities is to be deposited in an escrow account, following the mechanism used by contractors for Abandonment and Site Restoration (ASR) fund reservation in accordance with SKK Migas Working Guidelines No. PTK-040/SKKMA0000/2018/S0 concerning ASR.<sup>51</sup>

### 2.4 **Monetization of CCS/CCUS**

Contractors may monetize CCS/CCUS operations relating to CO<sub>2</sub> emissions from upstream oil & gas, using **2 schemes**:<sup>52</sup>



<sup>46</sup> Chapter III Article 1.3, PTK-070

<sup>47</sup> Chapter III Article 1.4 of PTK-070.

<sup>48</sup> Chapter III Article 2.1, PTK-070

<sup>49</sup> Chapter IV Article 1.1 of PTK-070

<sup>50</sup> Chapter IV Article 2.3, PTK-070 and Chapter VII Article 2.5.1, PTK-070.

<sup>51</sup> Chapter VII Article 2.5.5.2, PTK-070.

<sup>52</sup> Chapter VI Article 1.1, PTK-070.

If the CO2 emissions originate from sources and industries other than upstream oil & gas business activities, the monetization shall be in the form of revenues from the injection and storage services (storage fees).<sup>53</sup>

Contractors are required to undertake their best efforts in monetizing the implementation of CCS/CCUS including by way of conducting marketing, entering into sale and purchase agreements and/or other related contracts with counterparties<sup>54</sup>. It is unclear how such best efforts requirement would be assessed from time to time by SKK Migas.

Contractors must obtain SKK Migas' prior approval by submitting (i) a proposal to monetize their CCS/CCUS operations and; (ii) a review/evaluation of the counterparties and the market potential. Furthermore, Contractors must provide regular written reports on the implementation of monetization of CCS/CCUS operations to SKK Migas.<sup>55</sup>

## **2.5 Funding & Costs**

The estimated closure costs and post-closure monitoring of CCS/CCUS activities are part of the plan of development of the Work Area and can be adjusted by the Contractor with the approval of SKK Migas<sup>56</sup>. The estimated closure costs and post-closure monitoring of CCS/CCUS activities are to be presented separately from the estimated abandonment and site restoration (ASR) costs for oil & gas operations as set out in the plan of development.<sup>57</sup>



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<sup>53</sup> Chapter VI Article 1.2, PTK-070.

<sup>54</sup> Chapter VI Article 2.1, PTK-070.

<sup>55</sup> Chapter VI Article 3, PTK-070.

<sup>56</sup> Chapter VII Article 2.5.3, PTK-070.

<sup>57</sup> Chapter VII Article 2.5.3, PTK-070.



## Conclusion

Through the issuance of both PR 14/2024 and PTK-070, the Indonesian government has issued not less than 3 separate regulations on CCS/CCUS in the span of a year. This demonstrates the GOI's strong commitment to advancing CCS/CCUS and the ambition to apply this technology for the abatement of CO<sub>2</sub> emissions for domestic industries, and also to serve as a hub for the region and seek to monetize and give a second life to its increasing number of depleted reservoirs.

Despite the additional requirements and framework provided by the new regulations, more detailed provisions are still required to provide a comprehensive and usable regulatory regime to support the commercial development of CCS/CCUS across Indonesia. PR 14/2024 specifically calls for the issuance of further implementing regulations on certain matters such as the process for awarding Carbon Storage Permit Areas, on the ownership and transfer of ownership of the holders of exploration and storage operation permits, and the possible monetisation and revenue streams from CCS which we understand are to follow.

More clarity will also be required in terms of the available incentives or through imposing increased CO<sub>2</sub> emissions cap & trade requirements across various industrial sectors to boost the economic prospects of commercial CCS/CCUS projects.

As a sign of optimism following the issuance of the new regulatory framework, Singapore and Indonesia recently signed a letter of intent to work together on cross-border CCS opportunities between the two countries. A working group comprising of Singaporean and Indonesian government representatives will now seek to develop a legally binding bilateral agreement that will enable the cross-border transport and storage of carbon dioxide between the two countries as called upon by PR 14/2024. This is an encouraging sign of regional collaboration in this space which could pave the way to other similar bilateral agreements in the future, including with countries further afield in Asia, and help fulfil Indonesia's ambition to become a CCS hub for the region.

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