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Oil, Gas & Energy Law Intelligence

Lessons from Thailand on the Importance of Devising and Implementing Detailed Decommissioning Regimes by D. Beckstead

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Lessons from Thailand on the Importance of Devising and Implementing Detailed Decommissioning Regimes

*David Beckstead**

I. Introduction

Decommissioning oil and gas installations, particularly in offshore fields, is a costly endeavor that must be factored into the valuation process for upstream assets. Regulators can assist in this regard by undertaking to devise clear decommissioning guidelines when oil and gas fields are still producing, rather than at the end of their life cycles or when the production licenses are due to expire.

Exploration and production in Thailand began in earnest in the 1960s and 1970s, when the first set of petroleum concessions were awarded. While the first-generation concessions envisioned the eventual decommissioning of installations and the relinquishment of assets to the state, the language in both the concession agreements and the Petroleum Act, as it existed at the time, was vague. This is understandable in the context of a newly developing regulatory framework, where development of Thailand's first commercially viable natural gas and oil fields were obviously more pressing than the eventual need to decommission facilities in the distant future.

Thailand's Petroleum Act was amended in 2007 to incorporate more specific obligations on concessionaires with respect to decommissioning activities. Still, it was not until early 2016 when a detailed ministerial regulation on decommissioning was promulgated to fill in some of the gaps.¹ The Ministerial Regulation of 2016 leaves certain issues open, however, and potentially presents obligations on concessionaires which are more onerous than their concession agreements require. The transfer of assets agreement relating to the relinquishment of installations has not been finalized. Moreover, the guidelines on the degree of environmental remediation required by concessionaires as part of the decommissioning plan remains subject to the regulator's discretion. A number of Thailand's first-generation concessions are set to expire in less than five years, highlighting the urgency of the present situation.

This paper will argue that early clarity on decommissioning obligations is essential to ensure continued investment in existing oil and gas fields. Greater clarity will also make the decommissioning process more transparent, predictable, and beneficial to society as a whole. As a key concern from the state's perspective will likely be environmental remediation, it is preferable if the process is executed in compliance with publicly available standards and rules. Examining these issues through the lens of Thailand's experience, this paper will prescribe lessons to be learned for less-mature markets.

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¹ Ministerial Regulation Prescribing Plans and Estimated Costs and Security for Decommissioning of Installations Used in the Petroleum Industry, B.E. 2559 (2016), promulgated pursuant to Sections 14(5), 80/1 and 80/2 of the Petroleum Act.

II. Decommissioning Basics

A full overview of the technical aspects of decommissioning offshore installations is beyond the scope of this article. However, a brief review of the subject matter is essential to establish a baseline for elaborating on specific policy concerns.

Decommissioning activities for offshore oil and gas facilities involve the plugging and abandonment of wells, the flushing and/or removal of pipelines and risers, and the disposal of wellhead platforms. In addition to wells used in production, exploratory wells which had been temporarily plugged will also need to be fortified to ensure their readiness for final abandonment.

In broad strokes, the technical aspects of decommissioning involve the following steps:

- 1) The development, assessment and selection of various options and the creation of a planning process;
- 2) The cessation of production and safe plugging and abandonment of wells;
- 3) The removal of all or parts of structures, or the preparation for their remaining in situ; and
- 4) The disposal or recycling of removed facilities or installations.²

Gas pipelines can contain numerous contaminants such as heavy metals like mercury and lead, iron sulfides and iron oxides. If offshore pipelines are left in place without being properly flushed, the risk of leakage and seawater contamination is significant. In addition to the subsea pipeline network, wellhead platforms will also need to be disposed of, either by: 1) partial removal and abandonment, that is, leaving parts of the wellhead platform in place (i.e., removing only the topside structure); 2) complete removal and disposal of the entire platform on land; or 3) disposal at sea, whereby the platform is either partially or completely sunk.

As decommissioning is a reality for upstream petroleum production, policymakers need to understand how to balance a number of different and often competing interests and objectives. First and foremost, it is important to make explicitly clear what the purposes of decommissioning are. To a certain extent, the obvious answer will be the protection of the environment; however, minimizing costs, ensuring clear access for vessels making use of shipping lanes, and limiting the impact on local fisheries stocks, are each valid and related objectives.

An imperative goal is ensuring that the companies that are involved in petroleum production, and therefore profit most from upstream projects, are financially responsible for decommissioning costs. This objective is in line with the polluter pays principle, a concept enshrined by the Rio Declaration on Environment and Development.³ For policymakers, this will typically involve the establishment of a decommissioning fund, or the posting of a security bond in order to guarantee the petroleum producer's eventual performance. However, there are different policy tools that may be considered, including the pooling of resources and/or the state actively taking the lead in the decommissioning process with the use of private funds.

² Ashley Pittard, "Field Abandonment Costs vary widely Worldwide," *Oil and Gas Journal*, March 17, 1997 referenced in Peter D. Cameron, "Decommissioning Of Oil & Gas Installations: The Legal & Contractual Issues," Association of International Petroleum Negotiators, 1998.

³ Rio Declaration on Environment and Development, United Nations Conference on Environment and Development, 1992, at Principle 16.

Monitoring and auditing any installations which have been left in place during the decommissioning process will also be important, as will the allocation of liabilities for any long-term damage.

Decommissioning activities are extremely capital-intensive, and selecting a particular decommissioning approach over another can result in significant additional costs. Private oil and gas producers are exclusively concerned with the realization of profit. However, in some instances, some private sector petroleum producers may elect a more costly but environmentally friendly decommissioning strategy in order to reduce potential reputational damage. In general, however, it is natural to assume that private sector companies will be incentivized to minimize their expenses during the decommissioning process. This tension has the potential to give rise to disputes, as the competing interests of the state in promoting environmental protection may conflict with the companies' desire to minimize costs.

So long as concessionaires are to be responsible for the decommissioning of offshore installations, the key to ensuring that decommissioning activities are successfully undertaken is by continual and rigorous planning. The knowledge that installations, wells, pipelines, and other facilities will eventually need to be disposed of should provide incentives for producers to develop their fields in a responsible and well-planned manner. In addition to physical planning, mapping of the regulatory framework is seen as being of equal importance for oil and gas companies.⁴

From a policy perspective, the optimal approach for the state is to ensure that rules are clear, transparent and predictable. At the outset of exploration in any new block, decommissioning will most likely be an afterthought for oil and gas companies as well as lawmakers, meaning the decommissioning regime may be of less importance to spark initial investment. However, as fields mature through their lifecycle, upstream producers will be hesitant to invest more capital if the end of the project is accompanied by significant uncertainty.

III. A legislative History of Decommissioning in Thailand

i. The development of Thailand's Petroleum Act

The principal piece of legislation governing upstream oil and gas exploration and production in Thailand is the Petroleum Act.⁵ Under the Petroleum Act, the term "petroleum" is used to collectively refer to crude oil, natural gas, natural gas condensate, byproducts and other naturally occurring hydrocarbons in a free state, whether solid, semi-solid, liquid or gaseous, including heavy hydrocarbons which can be recovered in situ by thermal or chemical processes, but excluding coal, oil shale, or other kinds of rocks from which oil can be extracted.⁶ Perhaps the most fundamental prescription of the Petroleum Act is that petroleum is the property of the state, and the only way to explore for or produce petroleum has been by virtue of a concession.⁷ In June 2017, the Petroleum Act (No. 7) B.E. 2660 (2017) was enacted, amending Section 23 of the Petroleum Act and introducing production sharing agreements (PSA) and service contracts as alternative structures under which petroleum may be explored and produced.⁸ As

⁴ Mark Osa Igiehon, "Decommissioning of Upstream Oil and Gas Facilities" in *Oil and Gas: A Practical Handbook*, 2d ed, Geoffrey Picton-Tuberville (ed) (2014) 313 at 319.

⁵ Petroleum Act, B.E. 2514 (1971), as amended.

⁶ *Ibid* at s. 4.

⁷ *Ibid* at s. 23.

⁸ Petroleum Act (No. 7) B.E. 2660 (2017).

PSAs and service agreements are newly devised structures in Thailand, they have yet to be utilized in practice as of the date that this article was published.

The Petroleum Act was promulgated in 1971, with the initial set of concessions awarded under the act following shortly thereafter. The contractual terms of these initial concessions were prescribed by Ministerial Regulation No. 4, B.E. 2514 (1971), though later concessions have been based on revised terms.⁹ Initially, the Ministry of National Development was the government agency responsible for executing the concession agreement on behalf of the state and administering upstream exploration and production. The Ministry of Industry later assumed this role, and since 2002, the newly established Ministry of Energy has been conferred this responsibility. The petroleum concession takes the form of an agreement, signed by the minister from the appropriate ministry on the one hand, and by the representative(s) of the concessionaire on the other.

ii. Decommissioning obligations in concession agreements

The initial concessions, awarded pursuant to the terms laid out in Ministerial Regulation No. 4, are often referred to as the “Thailand I” terms. At the time these concessions were awarded the Petroleum Act did not contain any specific provisions addressing the decommissioning obligations of the concessionaire, other than the obligation to “execute all operations in accordance with sound technical principles and good petroleum industry practice in respect of petroleum operations and the conservation of petroleum resources.”¹⁰ The concession agreement provided a somewhat more detailed description of the concessionaire’s obligations in Clause 15(4), which reads as follows:

At the end of the petroleum production period or of the renewed petroleum production period in any production area, or at the earlier relinquishment of any whole production area or at the revocation of the Concession prior to the termination of said periods, the Concessionaire shall deliver up to the Government of Thailand free of charge all lands, buildings, roads, railways, petroleum pipelines, pumps, machinery, platforms, storage tanks, stations, substations, terminals, plants, harbours, installations and other facilities which are necessary for the conduct of exploration, production, storage or transport of petroleum, or which are in the nature of public utilities such as electricity, gas, water, communication or telecommunication system in connection with that production area; and the properties which are not usable shall be removed by the Concessionaire in accordance with the Minister’s instruction within three months from the date of the instruction.

The obligation clearly stipulates that the concessionaire is required to deliver the installations and other property to the state, as well as indicating that the concessionaire is obligated to remove property which is deemed unusable in accordance with the minister’s instructions. While this provision is logical as a general principle, it leaves a number of elements to be resolved at a later date.

⁹ Ministerial Regulation No. 4 B.E. 2514 (1971) promulgated pursuant to Sections 14 and 23 of the Petroleum Act. Ministerial Regulation No. 4 B.E. 2514 (1971) was subsequently repealed by Ministerial Regulation No. 17 B.E. 2532 (1989), which was subsequently repealed by the Ministerial Regulation Prescribing Rules, Procedures and Conditions in Concession Applications B.E. 2555 (2012).

¹⁰ *Supra* note 5 at s. 80.

The language contained in Clause 15(4) of the Thailand I concession terms has remained unchanged, and the current language remains in force under the so-called “Thailand III” terms. Once model PSAs and service contracts are developed, it will be interesting to see whether the Ministry of Energy maintains a similar contractual provision, or imposes alternative obligations on upstream producers with respect to decommissioning.

Throughout the last quarter of the 20th century, ministerial regulations have provided general statements with respect to restoration activities at the end of a concession, though the prescriptions were neither specific nor practical. Ministerial Regulation No. 12 B.E. 2524 (1981) introduced a requirement on concessionaires to “restore, so far as possible, the surface of the land and of the waters to its original condition.”¹¹ While this is generally acceptable as an overarching principle, even if baseline studies were carried out at the beginning of the concession, it may prove difficult or impossible to complete such a restoration towards the end of petroleum operations. Furthermore, the regulation imposes a requirement to complete such restoration activities within three months of the termination of the concession and upon the direction of the Director-General of the Department Of Mineral Fuels (DMF), Ministry of Energy.¹² This three-month timeframe echoes the language of Clause 15(4) of the concession agreement, and would likely prove difficult or impossible to implement in practice given the significant number of platforms and other assets involved.

iv. Introduction of Sections 80/1 and 80/2 to Petroleum Act

In 2007, the Petroleum Act was amended in order to begin the process of regulating decommissioning activities.¹³ The new Section 80/1 details the specific decommissioning requirements which the concessionaire is required to undertake, whereas Section 80/2 details obligations with respect to the posting of security.¹⁴

¹¹ Ministerial Regulation No. 12 B.E. 2524 (1981) promulgated pursuant to Sections 13, 14 and 15 of the Petroleum Act at s. 2 amending Section 40 of Ministerial Regulation No. 5 B.E. 2514 (1971).

¹² *Ibid.*

¹³ Petroleum Act (No. 6), B.E. 2550 (2007) at ss. 80/1 - 80/2.

¹⁴ Sections 80/1 and 80/2 read as follows: “**Section 80/1.** [1] For the purposes of promotion and preservation of environment, the concessionaire shall be responsible for the decommissioning of installations, structure, materials, equipment, and facilities used in the exploration, production, storage, or transportation of petroleum whereby the concessionaire shall submit this decommissioning plan together with estimated expenses thereof in order to seek the concurrence of the Director-General in accordance with the rules, procedures, conditions and period of time prescribed in the Ministerial Regulations. [2] In the case there are additional installations, structures, materials, equipment, and facilities used in the exploration, production, storage, or transportation of petroleum which must be decommissioned or the decommissioning technology has changed, or the estimated expenses of the decommissioning are varied, the Director-General shall have the power to order the concessionaire to amend, revise or adjust the plan and estimated expenses so approved under paragraph one, or the concessionaire may submit his proposal for the amendment to or adjustment of the plan or estimated expenses approved under paragraph one to the Director-General for his concurrence in accordance with the rules, procedures and conditions prescribed in the Ministerial Regulations. Upon approval by the Director-General, they shall be deemed the decommissioning plan and estimated expenses for such petroleum production area. [3] The concessionaire shall complete the decommissioning in accordance with the plan so approved under paragraph one or paragraph two. If the concessionaire fails to proceed with the decommissioning or proceeds in delays which may cause damage, the Director-General shall have the power to designate other persons to carry out the decommissioning on behalf of or jointly with the concessionaire using the security under Section 80/2. **Section 80/2.** [1] The concessionaire shall deposit a security for the decommissioning of installations, structures, materials, equipment, and facilities under Section 80/1 with the Director-General in accordance with the rules, procedures, conditions and period of time prescribed in the Ministerial Regulations. The security can be in the form of cash, Thai government bonds,

There are two key points to be taken away from a reading of Sections 80/1 and 80/2 of the Petroleum Act. First, the sole stated legislative intent for requiring the concessionaires to undertake decommissioning activities is the “promotion and preservation of the environment”. This is significant, in that regulators can often be required to contemplate numerous potential concerns when devising implementing rules, such as economic development and the needs of the state in general. In the case of offshore decommissioning, ensuring that maritime industries such as shipping and fisheries are not adversely affected would also appear to be worthwhile to take into consideration when developing regulations. Nonetheless, the drafters of the Petroleum Act have emphasized that the primary purpose of decommissioning is to promote and preserve the environment.

The second noteworthy point of Sections 80/1 and 80/2 of the Petroleum Act is the role of the director-general, which refers to the administrative head of the DMF. The Director-General’s approval is required in the finalizing of the decommissioning plan, which permits a great deal of discretion and potential subsequent policymaking in the form of subordinate rules, on what criteria the Director-General will consider when determining whether a decommissioning plan is acceptable. Sections 80/1 and 80/2 stipulate that the decommissioning process, including the amount of security deposit will be established in subsequent Ministerial Regulations. This effectively defers many detailed aspects of policy implementation to a future date.

With the introduction of Sections 80/1 and 80/2, it was clear that lawmakers were creating a decommissioning regime that required significant input from the primary regulator: the DMF. After the introduction of Sections 80/1 and 80/2, the DMF recognized that more work needed to be done to lay down specific and detailed regulations.¹⁵

v. Introduction of Ministerial Regulation in 2016

In 2016, a full nine years after the introduction of Sections 80/1 and 80/2 to the Petroleum Act, the Ministry of Energy promulgated the Ministerial Regulation Prescribing Plans and Estimated Costs and Security for Decommissioning of Installations Used in the Petroleum Industry, B.E. 2559 (2016) (the “Decommissioning Regulation”). The Decommissioning Regulation outlines the specifics on the concessionaire submitting a Decommissioning Plan

a bank guarantee, or any other form. [2] The security in the form of cash, Thai government bonds or any other assets, though not subject to enforcement of any judgment are not released from liability under this Act.

¹⁴ If the concessionaire fails to deposit the security, or deposit the security not in full as required or not within the period of time prescribed in paragraph one, the concessionaire shall pay a surcharge of two percent per month of the amount required or the shortfall, as the case may be, commencing from the due date and the Director-General shall give him a notice on the deposit of the security with surcharge to be made within 30 days from the date of receipt of the written notice. If the security and surcharge still are not properly deposited, the Minister may issue an order revoking the concession. [3] In the case that the Director-General designates other persons to carry out, on behalf of or jointly with the concessionaire, the decommissioning of installations, structures, materials, equipment, and facilities under Section 80/1, the security under paragraph one shall be used. If the security is insufficient, the concessionaire shall be responsible for the shortfall, and the balance, if any, shall be returned to the concessionaire. [4] The maintenance and disbursement of the security shall be in accordance with the rules, procedures and conditions prescribed in the Ministerial Regulations.”

¹⁵ “Thailand Decommissioning of E&P Installations Project,” Department of Mineral Fuels, Ministry of Energy, presentation of Dr. Witsarut Thungsuntonkhun, June 12, 2012, slides can be accessed at: http://www.ccop.or.th/eppm/projects/40/docs/10_Thailand_decom_2012.pdf.

(divided into an Initial Decommissioning Plan and a Final Decommissioning Plan).¹⁶ It also requires concessionaires to submit an Estimate of Decommissioning Costs, a Decommissioning Environmental Assessment Report, and a Best Practical Environmental Option Report to the director-general within prescribed timelines.¹⁷

The obligation of the concessionaire to begin the decommissioning process will be triggered by any of the following: 1) when the concessionaire does not use the installations continuously for more than one year; 2) when petroleum reserves of the concession are less than 40 percent of the sum of the accumulated petroleum production and the petroleum reserves; 3) when the remaining time for petroleum production as specified in the concession is five years or less; or 4) if the concessionaire wishes to commence decommissioning activities.¹⁸ A number of concessions are expiring in April 2022 with no further possibility of renewal, meaning the decommissioning obligations for the concessionaires thereunder have already been triggered.¹⁹

The Estimated Decommissioning Costs and Decommissioning Plan must be audited by authorized third parties based on qualifications prescribed by the Director-General and published in the Government Gazette.²⁰ As of the date of this article, the qualifications prescribed by the Director-General have not yet been published. Under the Decommissioning Regulation, the Director-General has the authority to accept the decommissioning reports or request clarifications and/or amendments if the reports are not in compliance with the prescribed rules.

In accordance with Section 80/2 of the Petroleum Act, the concessionaires will be obligated to make a security deposit to the director-general, which may be in the form of cash or a cashier cheque payable by a bank; Thai government bonds; a letter of guarantee issued by a bank; an irrevocable standby letter of credit; or any other security prescribed by the director-general and announced in the Government Gazette.²¹ The security deposit will be for an amount approved by the director-general which may not be less than the Estimated Decommissioning Cost.²² Failure to make a complete security deposit will result in a written warning from the Director-General, plus exposure to a surcharge of two percent per month of the unpaid amount.²³

The majority of the provisions in the Decommissioning Regulation provide guidance for concessionaires to make appropriate plans and estimates. It is significant to note the number of instances in which the Decommissioning Regulation requires additional guidelines to be prescribed by the Director-General of the DMF. It is also significant that the Decommissioning Regulation was only adopted in February 2016, even though a number of the first-generation concessions are scheduled to expire in 2022 and 2023. As concessionaires are required to deliver their Initial Decommissioning Plan and Estimated Decommissioning Costs, as well as deposit the security required for decommissioning with the Director-General of the DMF prior to the date on which the remainder of the production period is five years, there is a certain sense

¹⁶ Ministry of Energy promulgated the Ministerial Regulation Prescribing Plans and Estimated Costs and Security for Decommissioning of Installations Used in the Petroleum Industry, B.E. 2559 (2016) at s. 3.

¹⁷ *Ibid* at ss. 3 and 4.

¹⁸ *Ibid* at s. 5.

¹⁹ *Supra* note 15 at slide 39.

²⁰ *Supra* note 16 at s. 10.

²¹ *Ibid* at s. 23.

²² *Ibid*.

²³ *Ibid* at s. 31.

of urgency with respect to resolving the open legal issues relating to decommissioning in Thailand.

One of the open issues presented by the Decommissioning Regulation is the obligation of concessionaires to pay for decommissioning costs in the event the installations are turned over to the state at the end of the concession period. Section 22 of the Decommissioning Regulation requires the concessionaire to be responsible for the decommissioning of installations that are delivered to the state, unless otherwise provided for in the asset transfer agreement. It is unclear whether concessionaires will be willing to agree to an asset transfer agreement whereby they would remain financially liable for decommissioning installations years after they have surrendered their interest in the concession.

Moreover, since certain concession areas may have petroleum reserves which would permit production to continue past the expiry of the concession agreement, this presents an additional dilemma for the DMF; if it requires the concessionaire to decommission certain installations which could otherwise produce petroleum for a limited number of years, the state may effectively lose the ability to produce such petroleum forever. It is quite possible that petroleum reserves in such areas would be too low to spark significant interest in the private sector to construct new installations required to produce it. On the other hand, if the state assumes ownership in the installations, it may be assuming financial responsibility for decommissioning at a later date.

While the Decommissioning Regulation does provide significant guidance for concessionaires, a number of issues remain open and must be resolved.

vi. Additional regulatory hurdles

The option to dispose of wellhead platforms in place, or the so-called “rig-to-reef” option, is an appealing prospect to many concessionaires. Coupled with the reduced costs that disposal on land would entail, being responsible for the creation of the backbone of a new underwater ecosystem has positive potential reputational value. In addition to permission of the DMF, however, the rig-to-reef scheme will entail permissions from other governmental authorities.

Pursuant to the Fisheries Act, a concessionaire with offshore installations is not permitted to make any alterations to fishing grounds which would affect its former conditions unless permission is granted by the competent official at the Department of Fisheries.²⁴ In addition, the Act on Navigation in Thai Waters, B.E. 2456 (as amended), prohibits concessionaires to construct any structure which would encroach the sea within Thai waters unless permission is granted from the Department of Harbours.²⁵ In order to proceed with the rig-to-reef option, therefore, in addition to obtaining permission from the DMF, the concessionaire would also need to receive approvals from regulators who may take alternate policy objectives into consideration. The same may apply for other decommissioned installations to be left in situ.

²⁴ Fisheries Act, B.E. 2558 (2015) at s. 31.

²⁵ Act on Navigation in Thai Waters, B.E. 2456 (as amended) at s. 117.

IV. Unresolved Issues

i. Who pays decommissioning costs if concessionaire transfers installations to the state?

An open question under Thailand's upstream regime is who will bear the responsibility for decommissioning installations that are transferred to the state. The above section highlights the ambiguous language of the Decommissioning Regulation, as well as the potential conflict with the terms of the concession agreement under the Thailand I and III terms. The position of the DMF appears to be that the obligation will rest with the concessionaires, as its most recent annual report contains the following language: “[p]etroleum structures that are still usable eventually belong to the State, *while the expense burdens of decommissioning fall on the concessionaires* (emphasis added).”²⁶ This position seems to be in line with the language in Section 22 of the Decommissioning Regulation, as outlined above. It is unclear whether the contractual language in the concession agreements would support this contention, however, meaning there are potential grounds for disputes between the concessionaires and the Ministry of Energy over financial obligations relating to decommissioning.

When a concession period along with any extensions expires, but the concession area continues to have proven reserves of petroleum, the blocks will likely be put up for a tendering process. To date, the only host government instrument possible in Thailand has been the concession, whereby the concessionaire is the owner of installations during the production period. In the event the existing concessionaires successfully bid on re-tendered blocks, there will be no ambiguity as to who will bear responsibility for the eventual decommissioning. However, if new concessionaires successfully obtain the rights to produce petroleum in mature fields, it is unclear what legacy responsibilities (if any) the previous concessionaire will retain. Presumably the tendering terms would elaborate on this point further, but it would be more transparent if the requirements were explicitly set out in legislation or subordinate rules.

As mentioned briefly above, the recent amendment to the Petroleum Act introduces PSAs and service contracts as alternate structures to invest in upstream production in Thailand. In the event mature blocks are tendered to private petroleum companies in the form of a PSA or services agreement, it would be logical to assume that the state via the Ministry of Energy would retain ownership of installations. A PSA may contain provisions concerning shared costs upon decommissioning, but since a model or template PSA has yet to be developed, this point remains open.

Pursuant to the third paragraph of Section 22 of the Decommissioning Regulation, the Director-General of the DMF is responsible for prescribing the terms of the agreement to deliver installations. As the concessionaires are not free to opt-out of this “agreement,” this should be seen as a regulatory requirement rather than a true contractual relationship. At the moment, the agreement envisioned under Section 22 of the Decommissioning Regulation has not been published in the Government Gazette. A draft of the agreement is currently under review by relevant stakeholders, which presumably includes the relevant concessionaires, though the draft has not been made publicly available.

It is unclear what impact a refusal to sign the agreement would have on concessionaires. Moreover, the potential lack of negotiating ability on the part of concessionaires may give rise to disputes. Since the agreement envisioned in Section 22 is not actually an agreement, it would

²⁶ Annual Report, 2015. Department of Mineral Fuels, Ministry of Energy at 77.

be more logical to stipulate the terms of delivery within the text of the Decommissioning Regulation itself, or by way of a new Ministerial Regulation that would be generally applicable to all concessionaires.

ii. From a policy perspective, is it desirable for the state to assume coordinating responsibility for decommissioning?

Since the state has the greatest long-term interest in ensuring decommissioning activities are conducted appropriately and responsibly, an alternate approach to decommissioning would involve the state assuming the primary role in all decommissioning activities. If the security deposit under Section 80/2 of the Petroleum Act is taken into account along with the government take, the state could perhaps ensure more desirable decommissioning outcomes through the segregation of a decommissioning fund and establishment of a new work unit within the DMF to oversee decommissioning.

The incentives of petroleum producers are not well-aligned with those of the state when it comes to decommissioning. Petroleum producers are driven by profit; by definition, this requires them to minimize costs to the extent possible. It is logical to assume that producers will attempt to conduct decommissioning activities for the lowest possible price, rather than in accordance with the best long-term interests of the environment and local population. Moreover, the incentives will vary among concessionaires operating in Thailand. Well-established producers will have a greater incentive to remain on good terms with the Thai state. Smaller concessionaires, or those with only a few non-operating interests, may be less inclined to invest significant funds into decommissioning, even if it would be more environmentally sound to do so.

An alternative approach would be for the concessionaires to fund the decommissioning, through periodic asset transfers made throughout the lifespan of the concession, PSA, or service agreement, while the state actually implements and coordinates the plan.

iii. What considerations are the DMF to take into account when approving the Decommissioning Plan?

Pursuant to the Decommissioning Regulation, the Director-General of the DMF has the authority to approve the Decommissioning Plan, Estimated Decommissioning Cost, Decommissioning Environmental Assessment Report and Best Practical Environmental Option Report. The Director-General will be able to exercise a great deal of discretion when approving such plans, which therefore raises questions of what considerations will be taken into account when evaluating the submissions of the concessionaires. Furthermore, since the Director-General is bound in principle by the wording in Section 80/1, whereby decommissioning activities are to be carried out “[f]or the purposes of promotion and preservation of environment,” it is conceivable that civil society organizations would attempt to halt or delay the implementation of any decommissioning activities if they were deemed to not sufficiently promote or preserve the environment.

Perhaps the most famous case internationally of an environmental group inserting itself into the decommissioning decision-making process is the so-called “Brent Spar” episode. In brief, in the 1990s Shell had decided that it was no longer in need of the Brent Spar, an offshore platform in the North Sea. It had obtained permission from the government of the United Kingdom to sink the platform by tugging it into the Atlantic Ocean for final disposal. In

response, activists from Greenpeace occupied the Brent Spar in 1995 until Shell eventually agreed to tug the platform to land for final decommissioning.²⁷

In Thailand, there are numerous civil society groups who actively monitor developments in energy and the exploitation of fossil fuels. Indeed, the 21st bidding round for concession blocks which had been scheduled to occur in February 2015, was cancelled after being criticized by a number of such groups.²⁸ Recently, the Supreme Administrative Court ruled that wind farm development projects, as well as onshore petroleum production occurring on agricultural land were in violation of land use laws, despite these projects having obtained approvals from the Agricultural Land Reform Office, a government agency.²⁹ Even if private sector actors receive support from various government agencies, civil society groups have demonstrated a willingness to initiate lawsuits based on non-compliance with enabling statutes. It would not be implausible for an NGO to protest the approval by the DMF of a particular decommissioning plan if it did not sufficiently promote or preserve the environment, as required under Section 80/1 of the Petroleum Act.

V. Lessons for other jurisdictions

The DMF has been proactive in understanding the need to issue clear guidelines with respect to decommissioning obligations. Indeed, the DMF has effectively liaised with businesses in the sector, regulators in other jurisdictions, as well as civil society groups such as the Petroleum Institute of Thailand (PTIT), in order to share knowledge about the best practical approaches to addressing this impending issue; for this, it should be highly commended. The PTIT has also taken a lead role in promoting knowledge-sharing by publishing extensive guidelines and policy considerations for decommissioning works.³⁰

A simplistic critique of the present regulatory framework in Thailand would be to criticize the DMF for not providing more details and instructions at an early stage. This does not do the DMF justice, however, as it has been forced to work within the confines of the wording in existing legislation and concession agreements, maintain open dialogue with various stakeholders, all while embarking on a costly and unprecedented project in Thailand's history. Above all, it should be remembered that the decommissioning of offshore installations is not only new to Thailand, but also new to regulators and businesses around the world, meaning best practices are still in the process of being developed.

Thailand's upstream sector has suffered from a lack of new investment by existing concessionaires in recent years, largely because the amount of time remaining on existing concessions results in insufficient production timeframe to ensure that concessionaires can recover capital expenditures.³¹ Potential solutions to this lack of investment have included

²⁷ "1995 - Shell reverses decision to dump the Brent Spar," Greenpeace, available at <<http://www.greenpeace.org/international/en/about/history/Victories-timeline/Brent-Spar/>>.

²⁸ Announcement from Ministry of Energy of Thailand, Invitation to Submit Application for the Rights to Petroleum Exploration and Production in Exploration Blocks Onshore and Offshore in the Gulf of Thailand given on October 21, 2014 <<http://www.dmf.go.th/bidding21/th/home.php>> accessed June 14, 2017.

²⁹ Association of Lawyers for Environmental Protection et al v. Agricultural Land Reform Organization (ALRO) et al, Supreme Administrative Court decision number 1928/2559, 2016.

³⁰ "Thailand Upstream Facilities Decommissioning," Petroleum Institute of Thailand, 2017, available at <<http://thaidecom.ptit.org/>>

³¹ Annual Report, 2015. Department of Mineral Fuels, Ministry of Energy at 22.

opening new exploration blocks for competitive tendering.³² However, the problem remains compounded by the uncertainty caused by the apparent position of the DMF that concessionaires will be responsible for decommissioning costs associated with installations that have been transferred to the state. This potential for open-ended liability may chill new investment.

With the above in mind, it is useful to reflect on Thailand's experience in order to highlight lessons for policymakers in other jurisdictions. Thailand's concession regime has always placed the burden on concessionaires to remove installations that are no longer useful at the end of the concession period. Early regulations promulgated under the Petroleum Act reinforced the general principle that the concessionaires would be responsible for protecting against environmental degradation³³ The introduction of Sections 80/1 and 80/2, accompanied thereafter by the Decommissioning Regulation, followed the path of least resistance by requiring the concessionaires to not only be financially responsible for decommissioning, but also to take an active role in planning and executing decommissioning activities.

One alternative policy approach, which has been referenced throughout this article, is for the state to take an active role in coordinating and implementing decommissioning activities. This could be accomplished by the establishment of a segregated fund financed by petroleum producers for the specific earmarked purpose of eventual decommissioning. Contributions to the fund would be made throughout the lifecycle of the concession, PSA, or service agreement, and the amount of contributions would be based on continual reviews of existing works performed. Importantly, the contributions would have to be deemed as the petroleum producers' entire obligations with respect to decommissioning; there cannot be any room for the state to pursue additional decommissioning-related claims from the concessionaires at the end of the term of the agreement.

This approach would have at least three positive advantages to Thailand's current regime. First, it would enhance financial predictability for petroleum producers, and thus potentially promote greater investment. Collecting contributions throughout the lifecycle of the concession, PSA, or service agreement would also ensure that existing producers have contributed to the eventual decommissioning costs in the event the installations are transferred to the state for continued use prior to final decommissioning. Secondly, the state is better situated than any individual concessionaire to ensure that environmental protection and the interests of local populations and businesses are properly taken into account. Finally, with the state playing an active role in decommissioning, it would be able to coordinate nationwide activities while taking advantage of economies of scale. At the moment, concessionaires are required to consider decommissioning works on a project by project basis, rather than being able to coordinate implementation.

The state-led approach would certainly have drawbacks. For instance, it is possible that the state would not allocate decommissioning fund contributions in the most efficient manner. If the contributions are not collected throughout the lifecycle of the concession, PSA, or service agreement based on fair and accurate projections, it is possible that the fund may end up with a shortfall resulting in additional expenses for the treasury. State demands for higher

³² Rattapong Supapa. "Brief update on the current situation of upstream petroleum investment in Thailand," *Journal of World Energy Law and Business*, 2016, 306.

³³ Ministerial Regulation No. 5 B.E. 2514 (1971) promulgated pursuant to Section 14(1) of the Petroleum Act; Ministerial Regulation No. 12 B.E. 2524 (1981) promulgated pursuant to Sections 13, 14 and 15 of the Petroleum Act.

contributions to the decommissioning fund throughout the lifecycle may give rise to more disputes with producers.

This article is not necessarily advocating for a state-led approach to decommissioning works; rather, the purpose of its mention here is to emphasize the point that policies relating to decommissioning need not be predestined to follow the current model being used in Thailand and many other jurisdictions. The objectives of an offshore decommissioning regulatory regime should include environmental protection, minimizing costs, promoting local fisheries stocks, removing obstructions from shipping lanes, and reducing impacts on local populations. In order to achieve these objectives, the promulgation of a clear regulatory framework is essential, though there are many differing frameworks that could be implemented.

VI. Conclusion

Until recently, in Thailand and elsewhere, decommissioning has been treated as an afterthought rather than a significant aspect of responsible management of upstream oil and gas production. Thai regulators such as the DMF have recognized that decommissioning is a looming cloud on the horizon for at least the last decade, though it has proven difficult to proactively establish rules and regulations to clarify obligations. A key consideration should be that clear, transparent rules are required to ensure that investors can properly assess the price of assets. To its great credit, Thailand's DMF has blazed a regulatory trail, laying the foundations for a regime that will allow for decommissioning to occur in a responsible manner. While open questions remain, Thailand's experience should allow regulators in other jurisdictions to identify hurdles and implement effective policies for addressing them.