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Cambodia's Offshore Petroleum: Challenges and the Ways Forward

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Sok Sothearak & Khim Sotheara

Introduction

The finding of large deposits in the offshore reserve Block A in the Gulf of Thailand by Chevron in 2004 provided a major impetus for the exploration and extraction of gas and oil in Cambodia. This finding was a major game-changer for the nation, catapulting it into the league of oil-producing countries. In an effort to fully use its petroleum resources, the Kingdom of Cambodia has launched a number of audacious projects that are expected to draw in foreign capital and promote partnerships with well-known entities in the international energy sector. Along the way, the country encountered both possibilities and problems as she worked through the difficulties of managing the newly discovered petroleum treasure and getting it out of the ground. This analysis aims to provide insight into the development of petroleum resources in Cambodia's offshore territory.

Oil Discovery in Cambodia

The exploration of Cambodia's offshore petroleum has been a journey marked by significant developments and challenges. In the period spanning 1970 to 1987, early exploration activities were initiated, with the government granting rights to a substantial area of the Cambodian shelf to Elf du Cambodge under the Mining Law of 1968.¹ This led to seismic surveys and the drilling of wells with varying outcomes. However, the fall of Phnom Penh to the Khmer Rouge regime in 1975 delayed exploration activities for approximately 12 years.² The subsequent period from 1987 to 2002 saw the awarding of offshore blocks to international companies, including Enterprise, Campex, Premier, and Nawa. This led to the acquisition of seismic surveys and the drilling of several wells, revealing varying degrees of success in exploration programs. Additionally, the demarcation of specific areas and the acquisition of seismic lines and surveys further characterized this period.³

From 2002 to 2014, the offshore blocks were revised, leading to the signing of a production-sharing contract with Chevron Texaco and Moeco for Block A in the Gulf of Thailand. The following exploration activities, including seismic surveys and drilling, confirmed the presence of hydrocarbons. In 2014, Chevron sold its stake to Singapore's KrisEnergy, which eventually began

¹ Neak, Kimhak, Kakda Kret, Tola Sreu, Sirisokha Seang, and Chanmoly Or. "The Milestone of Cambodian First Oil Production in the Khmer Basin, Gulf of Thailand." *Open Journal of Yangtze Oil and Gas* 8 (2023), 19-42. doi:10.4236/ojogas.2023.82003.

² Ibid.

³ Ibid.

the production of Cambodia's first drop of oil in the Block A's Apsara oil field in 2020.⁴ However, the journey was not without challenges. KrisEnergy's financial struggles and eventual liquidation in 2021, coupled with the escape of the extracted oil storage tanker MT Strovolos, have added complexity to the sector.⁵ This chronology of events underscores the evolving nature of Cambodia's offshore petroleum sector, setting the stage for a deeper exploration of its viability, challenges, and the way forward.

KrisEnergy Episode

The trajectory of Cambodia's offshore petroleum sector, marked by the KrisEnergy episode, unfolds as a nuanced narrative reflecting promise, financial constraints, and geopolitical intricacies. Beginning with the historic extraction of Cambodia's first crude oil drop on December 28, 2020, KrisEnergy's role in Block A's Apsara oilfield initially held substantial economic promise. KrisEnergy, holding a 95% stake, and the Cambodian government, with a 5% share, anticipated a peak production rate of 7,500 barrels per day by mid-February 2021.⁶ The optimism sparked by the initial extraction was notable, with expectations of achieving a peak production rate of 7,500 barrels per day once the drilling program concluded in mid-February 2021.⁷ However, by March 2021, the actual production plummeted to 2,493 barrels per day, raising significant concern about the venture's viability.⁸ This downturn added up to KrisEnergy's mounting financial challenges. Subsequently, the KrisEnergy situation got more complicated. The company, grappling with a debt burden of \$476.8 million, initiated a debt restructuring plan in 2016 and was suspended from the Singapore stock exchange in August 2019. However, this lifeline decreased further as DBS Bank revoked its credit of \$200 million, leaving KrisEnergy to liquidation.⁹ As KrisEnergy liquidated, it underscored that the projected 7,500 barrels per day for Cambodia's economic prosperity, was far from achievable.¹⁰ The complexities of the oil industry became apparent. Offshore fields, to be financially viable, often involve production exceeding 9,500 barrels per day, a threshold KrisEnergy was not able to achieve.¹¹

In its operation in Cambodia's Apsara oilfield, KrisEnergy had charter a vessel, MT Strovolos, as a floating storage for the crude oil pumped from the field since late 2020. This vessel is an "Oil

⁴ "Singapore's KrisEnergy buys out Chevron in Cambodian oil block." Reuters. Last modified August 11, 2014. <https://www.reuters.com/article/krisenergy-chevron-cambodia-idINL4N0QH1DM20140811/>.

⁵ Evans, Damon. "KrisEnergy on Verge of Collapse As Cambodia Bet Backfires." Energy Voice. Last modified April 7, 2021. <https://www.energyvoice.com/oilandgas/asia/312994/krisenergy-on-verge-of-collapse-as-cambodia-bet-backfires/>.

⁶ "Roundup: Cambodia Starts Extracting First Drop of Oil After Years in Waiting." China.org.cn. Last modified December 29, 2020. https://www.china.org.cn/world/Off_the_Wire/2020-12/29/content_77061948.htm.

⁷ Ibid.

⁸ "KrisEnergy Proceeds Towards Liquidation." Khmer Times. Last modified June 8, 2021. <https://www.khmertimeskh.com/50869976/krisenergy-proceeds-towards-liquidation/>.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ibid.

Product Tanker” sailing under the flag of Bahamas.¹² However, in June 2021, the vessel navigated out of Cambodian water with neither informing the authority nor approval with 300,000 barrels of crude oil onboard. Cambodian government regarded this action of MT Strovolos as smuggling and theft. The vessel was later on seized by Indonesian navy at the request of Cambodian authority.¹³ Cambodian government claimed that the 300,000 barrels of crude oil belonged to Cambodia. Disputes between the vessel's owners, managers, and KrisEnergy added layers to this complication. MT Strovolos denied stealing the oil and claimed that it confiscated the oil as payment for its service which KrisEnergy failed to pay.¹⁴ Indonesia's legal proceedings resulted in the imprisonment of the vessel's captain. The subsequent sale of the confiscated oil for a total of about \$25 million brought financial closure to the incident. After deduction of other charges, \$20 million remained from the sale, of which Cambodia received 70% or \$14 million.¹⁵ This marked a negotiated resolution between all the stakeholders. Cambodia's earnings of over \$14 million from the oil sale underscored the economic consequence of the MT Strovolos incident.

What Went Wrong with Cambodia’s Petroleum Industry?

Since the bankruptcy of KrisEnergy and the incident with MT Strovolos, there has been no new investment in Block A’s offshore Apsara field of Cambodia. Despite calls on countries such as China, France, Japan, Malaysia, and Thailand by the Cambodian government to conduct a feasibility study and investment in the area, no investors showed any interest, at least publicly, in investing in the country’s offshore oil block.¹⁶ Therefore, it is interesting to try to examine why the sector, which was once a national pride, receives little to no interest from international prospectors. This analysis will look at legal and commercial aspects and compare the situations in Cambodia to her neighbouring countries, Thailand and Vietnam, whose upstream petroleum industries are relatively more successful. This examination will start first with legal frameworks and will then look at business viability of petroleum industry in the three countries.

Cambodia’s Legal Framework for Petroleum Industry

¹² "Ship STROVOLOS (Oil Products Tanker)." MarineTraffic.com. Accessed January 5, 2024.

<https://www.marinetraffic.com/en/ais/details/ships/shipid:370206/mmsi:-9178056/imo:9178056/vessel:STROVOLOS>.

¹³ Chea, Vanyuth. "Talks on 300,000-barrel Stolen Crude Oil Progressing." Khmer Times. Last modified July 28, 2022. <https://www.khmertimeskh.com/501120812/talks-on-300000-barrel-stolen-crude-oil-progressing/>.

¹⁴ Teng, Yalirozy. "Cambodia Gets \$14 Million Back from Stolen Oil." *Cambodianess*. Last modified October 12, 2022. <https://cambodianess.com/article/cambodia-gets-14-million-back-from-stolen-oil>.

¹⁵ Ibid.

¹⁶ "Energy Minister Calls on Investment in Oil Operations in Cambodia’s Block A." FRESH NEWS. Last modified November 21, 2023. <https://m.en.freshnewsasia.com/index.php/en/localnews/42903-2023-11-21-10-44-10.html>.

In Cambodia, petroleum sector is governed by the Law on the Management of Petroleum and Petroleum Products of 2019.¹⁷ The law dictates the management of both the upstream and downstream activities of petroleum supply chain in the country. According to this law, upstream activities include prospection, exploration, development, and production of petroleum, whereas downstream activities include treatment, transportation, stockpiling, and commercialization of petroleum and petroleum products.¹⁸ For our analysis, let us focus only on the upstream activities. In Cambodia, companies which want to conduct exploration, development, or production activities need to sign a ‘Petroleum Agreement’ with the Royal Government of Cambodia with the approval from the Prime Minister. Prospection activity, on the other hand, only needs approval from the Minister of Mines and Energy. A Petroleum Agreement will last for a maximum of 30 years, renewable for another 15 years.¹⁹ Within this 30-year timeframe, the exploration phase must not exceed 7 years, extendable by 3 years. This Petroleum Agreement has the characteristics of a production sharing contract (PSC). The Royal Government of Cambodia will collect revenue from petroleum production in the forms of royalty, shared profit, joint venture revenue, and corporate income tax. Diagram below illustrates how the revenue from upstream petroleum production is shared between the Royal Government of Cambodia and the late KrisEnergy. This is the original agreement between the Royal Government of Cambodia and Chevron.²⁰

¹⁷ "ច្បាប់ស្តីពីការគ្រប់គ្រងប្រេងកាតនិងផលិតផលប្រេងកាត [Law on the Management of Petroleum and Petroleum Products]." *Ministry of Interior*. Accessed January 14, 2024.

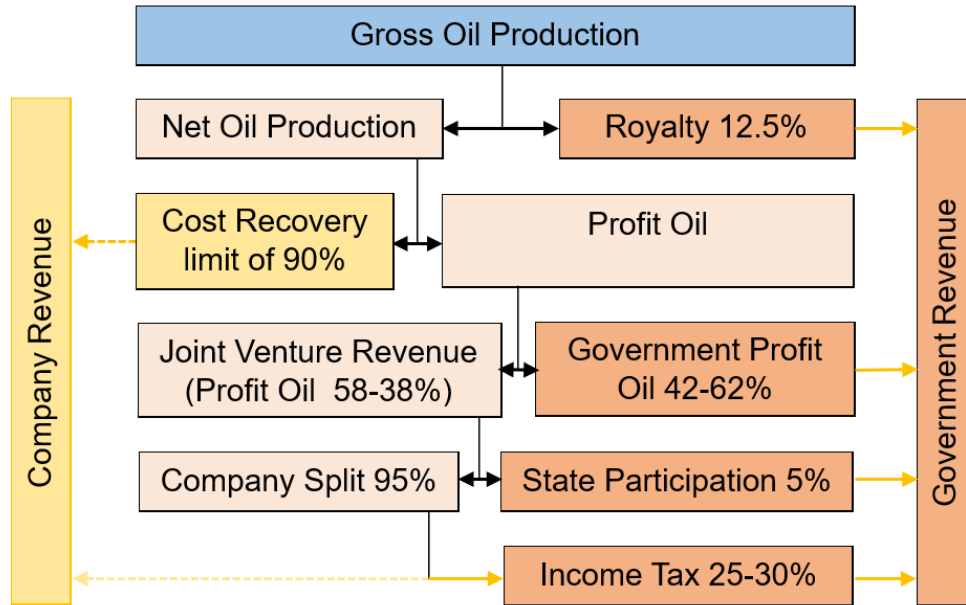
<https://www.interior.gov.kh/request/doc/url?path=1598445673.pdf>.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Neak, Kimhak, Kakda Kret, Tola Sreu, Sirisokha Seang, and Chanmoly Or. "The Milestone of Cambodian First Oil Production in the Khmer Basin, Gulf of Thailand." *Open Journal of Yangtze Oil and Gas* 8 (2023), 19-42. doi:10.4236/ojogas.2023.82003.

Figure 1. Agreement between the Royal Government of Cambodia and KrisEnergy



Source: Neak, Kimhak, Kakda Kret, Tola Sreu, Sirisokha Seang, and Chanmoly Or. "The Milestone of Cambodian First Oil Production in the Khmer Basin, Gulf of Thailand." *Open Journal of Yangtze Oil and Gas* 8 (2023), 19-42. doi:10.4236/ojogas.2023.82003.

Based on the agreement signed with KrisEnergy, the Royal Government of Cambodia will collect 12.5% of royalty from the oil produced. Then the company is allowed to deduct its spending (cost recovery) from the remaining ‘profit petroleum’. Between 42% and 62% of oil remaining after cost recovery will be kept as government profit. The rate will be based on how much oil is produced per day (see Table 1). The more the oil is pumped, the more proportion will be kept as government profit. The remaining oil is regarded as joint venture revenue. Because the government has a 5% stake in the joint venture with the KrisEnergy, it will get 5% of profit as dividend. The remaining 95% is the company’s profit, which is subject to 30% corporate income tax. However, based on the 2023 Law on Taxation, the company is also subject to the so-called tax on excess income (only for upstream petroleum companies) if its income-to-expense ration exceed a certain threshold (see Table 2).

Table 1. Rate of Profit Sharing After Cost Recovery

| Barrel of Oil Per Day | Company | Government |
|-----------------------|---------|------------|
| 0-10,000 | 58% | 42% |
| >10,000 - 25,000 | 53% | 47% |
| >25,000 - 50,000 | 48% | 52% |

| | | |
|---------|-----|-----|
| >50,000 | 38% | 62% |
|---------|-----|-----|

Source: Neak, Kimhak, Kakda Kret, Tola Sreu, Sirisokha Seang, and Chanmoly Or. "The Milestone of Cambodian First Oil Production in the Khmer Basin, Gulf of Thailand." *Open Journal of Yangtze Oil and Gas* 8 (2023), 19-42. doi:10.4236/ojogas.2023.82003.

Table 2. Tax on Oil, Gas, and Mineral Operations in Cambodia

| | | |
|---|------------------------------|--|
| company is subject to 30% corporate income tax | + 0% tax on excess income | if accumulated-income-to- accumulated-expense ratio (AI/AE) \leq 1.3 |
| | +10% tax on excess income | if $1.3 < AI/AE \leq 1.6$ |
| | +20% tax on excess income | if $1.6 < AI/AE \leq 2$ |
| | +30% tax on excess income | if $AI/AE > 2$ |

Source: Sok, Sothearak. "Revenue Mobilization of the Royal Government of Cambodia." *Center for Southeast Asian Studies, Royal University of Phnom Penh*. Last modified November 2023. https://rupp.edu.kh/iispp/cseas/cseas_analysis/documents/CSEAS_Analysis_14_Revenue_Mobilization_of_the_Royal_Government.pdf

Thailand's Legal Framework for Petroleum Industry

In Thailand, the petroleum sector is governed by the Petroleum Act and the Petroleum Income Tax Act. The latest amendment to these laws was in 2017. The acts established two contractual regimes: production sharing contract (PSC) and service contract (SC). The PSC is the same type of agreement as in the case of Cambodia. The contracting company to a PSC will have to pay royalty and income tax, and it share the profit petroleum with the government based on the agreed proportions.²¹ In the case of an SC, on the other hand, the contracting company acts as a service provider in terms of exploration and production for the government. The government 'hires' the company for these activities and pays for the service in the form of money or petroleum. The government owns the produced petroleum and does not share profit with the SC company.²² Under an SC, the government will have to pay royalty on the produced petroleum, then remuneration for the contracting company, and other expenses. The remaining profit will be remitted to the state treasury. Thus, the difference between PSC and SC is that the government share its profit with the contracting company under a PSC, but it does not under an SC.²³ For both cases, the contracting parties are subject to identical fiscal obligations. The exploration period shall not exceed 6 years, and the production period shall not exceed 30 years. The royalty on produced petroleum is 10%,

²¹ "Thailand Petroleum Law." *Chandler MHM Limited*. Last modified December 15, 2018. <https://www.chandlermhm.com/content/files/pdf/publications/pub6.pdf>.

²² Ibid.

²³ Ibid.

and the tax on income is 20%, down from the pre-2017 tax rate of 50%.²⁴ This might be to harmonize the corporate income tax rate for all types of businesses. In Thailand, cost recovery by the contractor in PSC is limited at 50%, while the contractor's share of profit petroleum with the government is also taped off at 50%.²⁵ In addition to these fiscal obligations, the contracting company has to pay signature bonus, production bonus, and other bonuses. According to the latest petroleum bid round (24th Thailand Petroleum Bidding Round in 2022), the contracting company must pay a minimum of USD 3 million as a one-time signature bonus per oil or gas block, another USD 3 million (minimum) per block as contribution fund for the Petroleum Development in Thailand, and another USD 3 million per block as production bonus.²⁶

Vietnam's Legal Framework for Petroleum Industry

In Vietnam, petroleum industry is currently governed by the 2022 Petroleum Law. Under this law, the term for normal upstream petroleum contracts is 30 years, of which up to 5 years is for the exploration phase.²⁷ For incentivised petroleum projects—those deemed challenging or strategically important by the Vietnamese government—the term is 35 years, of which the exploration phase can be up to 10 years. Contracting companies under normal projects must pay corporate income tax of 32% and export tax of 10%, whereas those under incentivised projects must pay corporate income tax of 25% and export tax of 5%.²⁸ In addition, they are allowed to collect up to 70% of profit petroleum as cost recovery in the case of normal projects and up to 80% in the case of incentivised projects.²⁹ The publicly available document of this law does not mention anything about the royalty on petroleum produced, but according to a joint UNDP-World Bank report,³⁰ the royalty ranges from 4% to 25% for oil production and 0% to 10% for gas production (see Table 3 and Table 4) and is to be paid at the point of delivery. In other words, the royalty is paid before cost recovery.

²⁴ Ibid.

²⁵ "Thailand Petroleum Bidding Round 2018 for Offshore Block G1/61 & G2/61." Ministry of Energy. Accessed December 17, 2023. http://bidding2018.dmf.go.th/G2/images/doc/Instruction_G2_61_Final_EN.pdf.

²⁶ "24th Thailand Petroleum Bidding Round Bidding Procedures." Ministry of Energy. Accessed December 16, 2023. https://dmf.go.th/UserFiles/bid24/conference/Bid_procedure_Bidding_24th.pdf.

²⁷ "Tax Alert 2022 Petroleum Law." Deloitte. Last modified February 2023. <https://www2.deloitte.com/content/dam/Deloitte/vn/Documents/tax/vn-tax-alert-2022-petroleum-law-en.pdf>.

²⁸ "Workshop on the 2022 Petroleum Law." PetroVietnam. Last modified March 2023. <https://www.pvn.vn/DataStore/Documents/2023/Luat%20DK/20230309%20WS%20on%20Petroleum%20Law%202022%20English%20final%201.pdf>.

²⁹ "Tax Alert 2022 Petroleum Law." Deloitte. Last modified February 2023. <https://www2.deloitte.com/content/dam/Deloitte/vn/Documents/tax/vn-tax-alert-2022-petroleum-law-en.pdf>.

³⁰ See "Vietnam's Petroleum Sector: Technical Assistance for the Revision of the Existing Legal and Regulatory Framework." Joint UNDP/World Bank Energy Sector Management Assistance Programme (ESMAP). Last modified December 2003.

<https://documents1.worldbank.org/curated/en/140381468779659236/pdf/ESM2690PAPER0Vietnam0petroleum.pdf>

Table 3. Royalty Rate on Oil Production in Vietnam

| Exploitation output | Incentivised project | Other project |
|-------------------------------------|----------------------|---------------|
| Up to 20,000 barrels/day | 4% | 6% |
| Over 20,000 to 50,000 barrels/day | 6% | 8% |
| Over 50,000 to 75,000 barrels/day | 8% | 10% |
| Over 75,000 to 100,000 barrels/day | 10% | 15% |
| Over 100,000 to 150,000 barrels/day | 15% | 20% |
| Over 150,000 barrels/day | 20% | 25% |

Source: "Vietnam's Petroleum Sector: Technical Assistance for the Revision of the Existing Legal and Regulatory Framework." Joint UNDP/World Bank Energy Sector Management Assistance Programme (ESMAP). Last modified December 2003.

<https://documents1.worldbank.org/curated/en/140381468779659236/pdf/ESM2690PAPER0Vietnam0petroleum.pdf>.

Table 4. Royalty Rate on Gas Production in Vietnam

| Exploitation output | Incentivised project | Other project |
|---|----------------------|---------------|
| Up to 5 million m ³ /day | 0% | 0% |
| Over 5 million m ³ to 10 million m ³ /day | 3% | 5% |
| Over 10 million m ³ /day | 6% | 10% |

Source: "Vietnam's Petroleum Sector: Technical Assistance for the Revision of the Existing Legal and Regulatory Framework." Joint UNDP/World Bank Energy Sector Management Assistance Programme (ESMAP). Last modified December 2003.

<https://documents1.worldbank.org/curated/en/140381468779659236/pdf/ESM2690PAPER0Vietnam0petroleum.pdf>.

Comparison of the Three Countries' Legal Frameworks

The differences between the legal frameworks for upstream petroleum development in Cambodia, Thailand, and Vietnam are presented in the Table 5 below.

First, the royalty rates are different. Cambodia's and Thailand's latest legislations dictate a fixed rate of 12.5% and 10% respectively on all types of petroleum produced, whereas Vietnam imposes variable royalty rates in accordance with the volume of petroleum production. In addition, Vietnam also differentiates royalty for oil and royalty for gas. Another interesting feature is that in Cambodia and Vietnam, royalty is to be paid before the contracting company deducts all its expenses (cost recovery), while in Thailand, royalty is to be paid only after company's cost recovery.

Second, speaking of cost recovery, a petroleum contractor in Cambodia can deduct its expenditure from up to 90% of the petroleum produced (after paying royalty). This rate is 70% (or 80% for incentivised project) in Vietnam and 50% in Thailand. Nonetheless, because cost recovery in

Thailand is realised before paying royalty, it is not necessarily smaller than the recovery rates permitted in Cambodia or Vietnam.

Third, regarding corporate income tax imposed on contracting company, it appears that the rate in Cambodia is higher than those in the other two countries. The country charges 30% income tax on petroleum business. Additionally, the company also has to pay ‘tax on excess income’ between 0% to 30% of the excess profit if its income-to-expense ratio exceed certain thresholds (see Table 2). Fourth, regarding the case of production sharing contract (PSC), a contracting company also has to split the profit (after royalty and cost recovery) with the government of each respective country. In the contract between Cambodian government and KrisEnergy, the company’s share of profit is limited at 58%. The more the petroleum is extracted, the less the company’s share of profit is. Cambodia’s petroleum law does not dictate the certain proportion of share profit, so it is decided based on the negotiation between the government and the company. In Thailand, on the other hand, the proportion of shared profit of the contracting company is limited at 50% by the petroleum law. On the other hand, the information about profit sharing in Vietnam’s latest legislation is not publicly available. The only thing we know is that the state-owned Vietnam Oil and Gas Group (also known as PetroVietnam) represents the government’s share of profit in a PSC with the contracting company.³¹

All of the fiscal obligations mentioned in this section do not include the registration fee or bidding fee required when a company applies for a petroleum contract or concession, since every country usually imposes these fees, albeit at different rates.

Table 5. Comparison of Legal Frameworks on Petroleum Development

| | Cambodia | Thailand | Vietnam | |
|--------------------|--|--|--|---|
| | | | Normal Project | Incentivised Project |
| Term of Contract | up to 30 years <i>(extendable 15 years)</i> | up to 30 years | up to 30 years | up to 35 years |
| Exploration Period | up to 10 years | up to 6 years | up to 5 years | up to 10 years |
| Royalty | 12.5% <i>(paid before cost recovery)</i> | 10% <i>(paid after cost recovery)</i> | 6% to 25% (oil) 0% to 10% (gas) <i>(paid before cost recovery)</i> | 4% to 20% (oil) 0% to 6% (gas) <i>(paid before cost recovery)</i> |
| Income Tax | 30% | 20% | 32% | 25% |

³¹ "Decree On the Model Petroleum Production Sharing Contract." The Government of Socialist Republic of Viet Nam. Last modified April 22, 2013. <https://s3.amazonaws.com/rgi-documents/a8edd49c16d9e0f1ffd45cd2dcfab2b6ba89a37e.pdf>.

| | | | | |
|--|--|--|--|---|
| | + tax on excess income (0% to 30%) | | | |
| Cost Recovery | up to 90% | up to 50% | up to 70% | up to 80% |
| Contractor's Share of Profit Petroleum | up to 58% | up to 50% | N/A | N/A |
| Other Fiscal Obligations | <ul style="list-style-type: none"> • export tariff: 10%³² • signature bonus: USD 200,000³³ | <ul style="list-style-type: none"> • signature bonus: USD 3 million • production bonus: USD 3 million • Petroleum Development fund: USD 3 million | <ul style="list-style-type: none"> • export tariff: 10% | <ul style="list-style-type: none"> • export tariff: 5% |

Source: compiled by the author

Business Viability

After analyzing the legal aspect in the three countries, it is sensible to examine the business aspect of their respective petroleum sector. Let us start with the situation in Cambodia. The government of Cambodia estimated that the Apsara field held 30 million barrels of oil, which was recoverable over nine-year period, or 7,500 barrels a day.³⁴ However, according to KrisEnergy, it could pump only around 3,000 barrels per day, less than half the estimated figure. So far, the company had pumped around 300,000 barrels of oil before its bankruptcy.³⁵ In early 2021, KrisEnergy hired a third party company, Netherland, Sewell & Associates Inc, to analyse the Apsara oil field. The result showed that the five operating wells in the field has little to zero chance in terms of

³² "Customs Tariff of Cambodia." General Department of Customs and Excise. Accessed December 19, 2023. <https://customs.gov.kh/en/publications/14037-customs-tariff-of-cambodia-km-2022>.

³³ "Oil and gas projects in Cambodia: A regulatory framework and commentary on prospects for investors." CMS Law-Now. Last modified February 26, 2015. <https://cms-lawnow.com/en/ealerts/2015/02/oil-and-gas-projects-in-cambodia-a-regulatory-framework-and-commentary-on-prospects-for-investors>.

³⁴ "Oil and Gas Resources." Open Development Cambodia (ODC). Last modified November 8, 2020. <https://opendevdevelopmentcambodia.net/topics/oil-and-gas-resources/#:~:text=The%20government%20has%20estimated%20that,be%20recovered%20over%20nine%20years.&text=In%20August%202017%20the%20government,oil%20is%20slowly%20getting%20closer>.

³⁵ Takahashi, Toru. "Cambodia Stops Oil Production but Retains Promising Undersea Rights." Nikkei Asia. Last modified July 23, 2021. <https://asia.nikkei.com/Business/Energy/Cambodia-stops-oil-production-but-retains-promising-undersea-rights#:~:text=Cambodia%20stops%20oil%20production%20but%20retains%20promising%20undersea%20rights,-Territorial%20talks%20with&text=BANGKOK%20%2D%2D%20Cambodia%20saw%20its,in%20less%20than%20six%20months>.

production improvement. This was likely due to geological complexity and lower volume of hydrocarbon-in-place.³⁶

In comparison, Thailand's oil production in the same area is 46,700 barrels a day, not to mention gas (2,000 million standard cubic feet a day) and condensate (120,000 barrels a day).³⁷ Likewise, Vietnam's nearby Song Doc field off the Gulf of Thailand (located in Block 46/02) can produce 30,000 barrels per day.³⁸ Cambodia's production is, after all, ten times (or more) as small as those of her neighbours. From these, it is reasonable to conclude that the business prospect for Cambodia's Apsara oil field is not so profitable for contracting company.

Possible Solutions for Development of Cambodia's Petroleum Industry

So far, the analysis compares the legal and business aspects of upstream petroleum development in Cambodia with those in the two neighbouring countries. Based on the findings, this section will propose some recommendations for dealing with challenges the industry has faced.

Revision of Legal Framework

Apparently, the biggest challenge for company eyeing the investment of upstream petroleum in Cambodia is profitability. The prospect of 30 million barrels of oil (7,500 barrels of oil a day) in the Apsara field seemed promising at first, but the reality of 3,000 barrels of oil per day shattered both the company's balance sheet and future prospect of petroleum development. Additionally, the imposition of tax on excess income further hurt profitability of the contracting company. Petroleum exploration and production is a high-risk-high-return business, but low profit and high tax rate make investment in Cambodia particularly riskier for investors. This might be the reason that Chevron sold its stake in Cambodia's Apsara field to KrisEnergy in the first place. Therefore, the Royal Government of Cambodia should consider revising the fiscal obligation it imposed on contracting company if it wants to attract investment in this field. According to the analysis, there are some ways we can learn from the neighbouring countries. First of all, getting rid of the tax on excess income can increase profitability for the contractor and attractiveness of the industry. Conversely, the Royal Government of Cambodia can keep the tax on excess income but lower the corporate tax rate to, say, 20% (standard corporate tax rate imposed on companies in Cambodia). The second option is more reasonable than the first choice. Since the tax on excess income takes into consideration the revenue-expense ratio of the contractor, it allows room for the contractor to

³⁶ Badzmierowski, Brian. "NSAI report: Little to zero chance of Apsara crude production will improve." Khmer Times. Last modified April 28, 2021. <https://www.khmertimeskh.com/50847572/nsai-report-little-to-zero-chance-of-apsara-crude-production-will-improve/>.

³⁷ "Petroleum Province." Department of Mineral Fuels. Accessed December 9, 2023. https://www.dmf.go.th/bid20/petro_province.html#:~:text=Gulf%20of%20Thailand,-In%20the%20past&text=Some%20areas%20produce%20oil%20e.g.,field%20in%20B6%2F27%20block.

³⁸ "FPSO Song Doc Pride MV19 | Projects | MODEC." MODEC. Accessed December 10, 2023. <https://www.modec.com/project/detail/songdoc.html>.

breathe if its revenue does not meet a certain threshold. Thirdly, following what Vietnam has done, the Royal Government of Cambodia can categorize petroleum blocks or fields into normal projects and prioritized projects. The blocks with low prospect of petroleum or those with challenging geological obstacles can be categorized as prioritized (or incentivised) projects. The fiscal obligations of the contracting company in the prioritized projects can be made lighter than those in the normal projects, where the current legal framework is applied. For instance, the offshore oil or gas blocks can be categorized as prioritized projects, whereas the onshore ones can be categorized as normal projects. This will incentivise companies and offset their risks in exploring and developing offshore fields. Compared to Thailand and Vietnam, Cambodia actually has a more favourable legal framework in terms of contracting period, exploration period, cost recovery rate, and signature bonus. If we can make some more changes, the petroleum industry in Cambodia might become more attractive and competitive. Minor improvement such as translation into English of Law on Petroleum and Petroleum Product and Law on Taxation might also be useful.

Creation of a State-owned Company

In the Pentagonal Strategy Phase 1, the strategic roadmap of the newly-elected Royal Government of Cambodia, there mentions the establishment of a national petroleum company. Although there is no detail regarding the company, it can be assumed that the rationale behind the establishment of such a company is to provide impetus to the petroleum industry in Cambodia. The absence of vigorous private investment in the upstream sector might force the government to take matters into its own hands. Otherwise, the government might feel the need for taking control of the country's petroleum resource. The development of a state-owned petroleum company is also evident in Thailand and Vietnam.

In Thailand, the PTT Public Company Limited is the state-owned petroleum firm, with more than 50% of its stake owned by Thailand's Ministry of Finance.³⁹ The company has operations in both upstream and downstream business. It involves in petroleum exploration and production, petrochemical and refining, natural gas distribution and import, gas separation, liquefied natural gas (LNG) terminals, LNG regasification, petroleum retail business, and new-energy-source business.⁴⁰ The company has a monopoly on natural gas pipelines in the country and has international operations as well.⁴¹ The company, however, does not have a monopoly on upstream and downstream petroleum businesses in the country. In this regard, it only exists alongside private companies.

³⁹ "PTT Public Co., Ltd." Nikkei Asia. Accessed January 2, 2024. <https://asia.nikkei.com/Companies/PTT-Public-Co.-Ltd>.

⁴⁰ "PTT Company Profile." PTT Public Company Limited. Accessed January 2, 2024. https://www.pttplc.com/uploads/About/PTT_COMPANY_PROFILE_ENG_22.pdf.

⁴¹ Tennant, David, and Adam Brown. "Gas Regulation." Law Business Research. Last modified March 2, 2023. <https://www.chandlermhm.com/content/files/pdf/publications/Gas%20Regulation%20-%20Thailand%20GETTING%20THE%20DEAL%20THROUGH%202023.pdf>.

In Vietnam, Vietnam Oil and Gas Group (PetroVietnam) is the state-owned petroleum conglomerate. It is wholly owned by the Vietnamese government. The company has a quasi-monopoly in the oil and gas sector. It has various business segments in upstream petroleum business, downstream business, energy trade, electricity generation, fertilizer production, maintenance service and engineering, banking, insurance, and marine transportation of petroleum.⁴² The company is the only company which has access to Vietnam's oil and gas reserves. In other words, any foreign companies wishing to make investment in upstream petroleum in Vietnam have to create a joint venture or production sharing contract with PetroVietnam. This is because, by law, Vietnam does not permit 100% foreign ownership of a company in oil, gas, and mining sectors.⁴³ Like PTT in Thailand, PetroVietnam also has monopoly over the management of Vietnam's gas pipelines.

It is still too early to assume what type of state-owned company the Royal Government of Cambodia wishes to establish. Whether it wants to create a firm in an open-market system like PTT in Thailand or a more overarching enterprise in a semi-monopoly market like PetroVietnam in Vietnam, it is not known yet. However, the establishment of a national petroleum company in Cambodia might come sooner rather than later and might happen unexpectedly as the extraction of petroleum is one of the priorities for economic diversification of the seventh legislature Royal Government of Cambodia.

There are both advantages and disadvantages in establishing a national petroleum company. On the bright side, a national company will jumpstart the production of oil in the Apsara field and will lead to further exploration of petroleum resources, essentially filling the investment vacuum in this industry. Direct control on the production also means more revenue for the state's coffer. In addition, upstream development through a state-owned company allows the government to use the company to advance other agendas such as supplying domestic market in times of global supply shocks or providing employment opportunities in the industry for the citizens. Furthermore, a national petroleum company can accumulate expertise, technological improvement, and skills transferable to other sectors. This allows the company to internationalise and become a revenue earner for the government on the global stage like the way Thailand's PTT has been doing. A national company is also viewed as a guarantee for the country's national security, a national pride, and a tool for garnering popular support for the government as well.⁴⁴

⁴² "Vietnam Oil and Gas Group (PetroVietnam)." PetroVietnam. Accessed January 2, 2024.

<https://www.pvn.vn/DataStore/Documents/2018/Brochure/Projects%20calling%20for%20investment.pdf>.

⁴³ "Set Up Your Business in Vietnam With Our Company Formation Guide." InCorp Global. Last modified March 16, 2023. [https://www.incorp.asia/blogs/set-up-business-vietnam-with-company-formation-guide/#:~:text=Vietnam%20permits%20100%25%20foreign%20ownership,Trade%20Organization%20\(WTO\)%20standards](https://www.incorp.asia/blogs/set-up-business-vietnam-with-company-formation-guide/#:~:text=Vietnam%20permits%20100%25%20foreign%20ownership,Trade%20Organization%20(WTO)%20standards).

⁴⁴ Bauer, Andrew. "Upstream Oil, Gas and Mining State-Owned Enterprises: Governance Challenges and the Role of International Reporting Standards in Improving Performance." Extractive Industries Transparency Initiative | EITI. Last modified August 31, 2018.

https://eiti.org/sites/default/files/attachments/upstream_oil_gas_and_mining_state-owned_enterprises.pdf.

On the other hand, there are also a lot of problems associated with a state-owned company. First of all, mismanagement and corruption can ruin all the benefits deriving from the natural resources. The resources like petroleum can be depleted without offering much growth to the economy or benefits for the people. This is particularly dangerous when there is a lack of rules and law enforcement governing the way the company operates.⁴⁵ Second, a petroleum is a sophisticated industry which requires a lot of human resources in technical aspect and trade know-how. This poses a very challenging issue for Cambodia, where human resources in petroleum engineering and geoscience is scarce. The first and second problems lead to the third issue of depletion of national budget. The establishment of a state company will require a lot of upfront investment by the government. As such, if the company does not yield favourable profit, it will become a loss maker and burden for the state budget. This is not necessary caused by mismanagement of the company or lack of human capital. The loss of profit can also be due to market condition. Current energy market is very volatile, with price of oil and gas fluctuating more often than not. This threatens to diminish the upfront investment made in exploration and production efforts.

Possibility of Joint OCA Development with Thailand

Cambodia and Thailand have a long-standing territorial dispute dating back to the 1970s, which they have been trying to resolve peacefully since the 1990s. This dispute centers on the overlapping claim area (OCA) in the Gulf of Thailand, spanning 26,000 square kilometers and believed to hold significant reserves of natural gas, condensate, and oil. The overlapping claim area is located near Cambodia's Apsara field and Thailand's Erawan gas field.⁴⁶ In 2001, the two countries signed a Memorandum of Understanding (MoU) to establish mechanisms for negotiation and joint exploitation of natural resources in the OCA. However, the MoU faced challenges and was temporarily shelved in 2009, leading to limited progress despite reaffirmations by successive administrations.

The urgency to address the OCA issue has gained momentum due to rising energy prices, which have become a significant driver in the renewed emphasis on discussions. Thailand is highly exposed to the LNG market and experienced price spikes in the past. Both countries are eager to secure a sustainable energy future in the face of a looming power crisis.⁴⁷ In 2023, Thailand's Deputy Prime Minister and Energy Minister, Pirapan Salirathavibhaga, proposed a shift in negotiation strategy. He emphasized the importance of focusing on joint development over the delimitation of territorial seas. Pirapan argued that resolving territorial disputes was complex and time-consuming, with both nations having legitimate claims, making it challenging to determine

⁴⁵ Ibid.

⁴⁶ May, Kunmakara. "Cambodia Eyes Joint Energy Future with Thailand." The Nation. Last modified November 4, 2023. <https://www.nationthailand.com/thailand/policies/40032527>.

⁴⁷ Turton, Shaun. "Rising Energy Prices Rekindle Thai, Cambodian Interest in Disputed Waters." Nikkei Asia. Last modified November 7, 2023. <https://asia.nikkei.com/Business/Energy/Rising-energy-prices-rekindle-Thai-Cambodian-interest-in-disputed-waters>.

right from wrong.⁴⁸ The current Thai government, led by Prime Minister Srettha Thavisin, is looking to expedite negotiations with Cambodia and focus on the joint extraction of petroleum resources, with Deputy Prime Minister Pirapan leading the effort. Both nations recognize that energy is a pressing issue and are seeking to collaborate for mutual benefits. However, details about the composition of a new joint technical committee and its jurisdiction remain uncertain.⁴⁹ Recently, both governments have agreed for a talk to be held on the 7th of February 2024. To give impetus to the discussion, the focus will be on utilizing energy resources in the OCA rather than resolving the maritime border dispute.⁵⁰ If successful, the joint development will provide untapped revenue for both Cambodian and Thai governments through shared royalty and profit from the concessions of the fields in the area.

Conclusion

In conclusion, the production of petroleum in Cambodia's offshore territory is a lengthy and bumpy journey. The financial issue and eventual liquidation of the sole contractor in the Block A field paused the long-awaited production of oil. Low production rate coupled with tight fiscal burden and probably issues such as red tape and corruption obscure the profitability and attractiveness of investment in the country's offshore petroleum. The Royal Government of Cambodia might need to tweak some elements of the legal framework in order to attract investors. Otherwise, as the oil will not go spoiled, the government might want to work on a more permanent solution by establishing a national petroleum company and continuing to develop human resources and know-how in petroleum-related skills. Anything has pros and cons, but the most important thing is the exploitation of natural resources must contribute at maximum to long-term economy growth, people's welfare, and ecological sustainability.

⁴⁸ "Thai Government Tweaks Strategy for Joint Extraction of Petroleum Resources with Cambodia." Thai PBS World. Last modified October 30, 2023. <https://www.thaipbsworld.com/thai-government-tweaks-strategy-for-joint-extraction-of-petroleum-resources-with-cambodia/>.

⁴⁹ Ibid.

⁵⁰ "Thailand and Cambodia to Start Talks on the Energy-rich Area in the Gulf of Thailand on February 7." Khmer Times. Last modified January 11, 2024. <https://www.khmertimeskh.com/501421398/thailand-and-cambodia-to-start-talks-on-the-energy-rich-area-in-the-gulf-of-thailand-on-february-7/>.

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