The Energy Industry in Southeast Asia

Structures, Players, and Processes

A report in the CSIS-Pertamina Southeast Asia Energy Security Roundtable Series
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About the roundtable

This report provides a summary of the discussion from a CSIS roundtable held on May 22, 2017, as part of the CSIS-Pertamina Energy Security Roundtable Series. The discussion brought together government, industry, financial, and policy experts to explore the structure of the energy industry in Southeast Asia and the changing role of national oil companies and other key energy players in the region. This was the second in a series of roundtables that will be convened this year to examine the most important energy issues affecting Southeast Asia and their broader strategic significance to regional and global energy security.
Southeast Asia’s ongoing transition from an energy-exporting to an energy-importing region is challenging governments to adjust their energy policies and regulatory environments. It is also prompting them to undertake institutional reform and infrastructure investments in order to adapt to changes in regional energy consumption patterns. National oil companies (NOCs) will play a key role in this transition process given their importance in several of Southeast Asia’s key energy-producing countries. Seven of the 10 member states of the Association of Southeast Asian Nations (ASEAN) have a NOC of some sort, and some of these NOCs are major global energy companies with tens of billions of dollars in annual revenue.

Southeast Asian NOCs, particularly the major NOCs in oil and gas producing countries, face a broadly similar set of challenges. First, they need to boost domestic production of oil and gas to lessen the need for imports to meet their home countries’ energy needs. This requires investment both in exploration to replace reserves as they are depleted, and in production operations to develop these new reserves, which are often technically difficult and more expensive to produce than the fields they replaced. NOCs can undertake these activities themselves if they have the necessary financing and technical and managerial expertise, or they can seek out partnerships with other oil companies—oftentimes experienced international oil companies (IOCs) but other times NOCs from other regions.

Domestic production in Southeast Asia is almost certainly insufficient to keep up with growing consumption, however, even with stepped-up exploration and production efforts. As a result, Southeast Asian NOCs face increasing pressure to look overseas to acquire oil and gas assets and secure long-term energy supplies, both for the energy security of...
their home countries and for their own bottom line. This shift toward global operations can be a challenge for NOCs that are used to operating in a more familiar domestic political environment, sometimes as market monopolies, and struggle to operate as efficiently as the top NOCs and IOCs that are competing for global opportunities. Making this transition requires a great deal of professionalism, investment capital, and technical expertise, and some players are further along in the process than others.

Finally, almost all NOCs face expectations to contribute to the noncommercial objectives of their national governments, and Southeast Asian NOCs are no exception. The degree to which NOCs are expected to play a political and social function in their home countries varies, but all have the challenge of meeting these obligations without undermining their competitiveness with purely profit-driven competitors.

The second discussion in the CSIS-Pertamina Southeast Asia Energy Security Roundtable Series looked at three key Southeast Asian NOCs—Malaysia’s Petronas, Indonesia’s Pertamina, and Thailand’s PTT. The discussion explored the ways in which the structure, players, and processes in each country’s energy bureaucracy and industry shape the behavior and performance of these NOCs and their ability to successfully make the transition into global oil and gas players.

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<th>National Oil Company</th>
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<th>Total 2016 Revenue (in billions USD)</th>
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* 2013–2014 fiscal year
** 2015

Source: Company annual reports, official government statistics, and press reports
Case Studies

Petronas

Malaysia’s Petronas (short for Petroliam Nasional) is viewed as one of the world’s best-managed NOCs and has achieved great success over the past three decades in implementing an overseas expansion strategy that has transformed it into a truly global company. Petronas’s successful transition from a typical NOC focused on domestic production into a major international energy player active in more than 20 countries makes it a valuable example for other NOCs looking to make similar transitions.

Petronas was founded in 1974, and spent its first two decades focused primarily on managing oil and gas production in Malaysia. Petronas oversaw the introduction of a production-sharing contract (PSC) regime with key IOCs like Shell and Exxon, which required tough negotiation to convince these companies to surrender their preexisting concessions in Malaysia. Petronas also undertook efforts to develop Malaysian expertise in the oil and gas business by gradually expanding its domestic operations from production into exploration, LNG exports, refining, petrochemicals, and fuel sales. This successful learning process set the stage for Petronas’s subsequent transformation.

In the early 1990s, Petronas began its expansion into international exploration and production operations to replace its depleting domestic oil and gas reserves, beginning in Southeast Asia but eventually focusing its efforts in large part on Africa. Petronas currently has an upstream presence in 26 countries, and revenue from international operations has been the largest contributor to Petronas’s total revenues since 2013.

Petronas also made a move into shipping and logistics, building the Malaysia International Shipping Corporation (now MISC) into one of the world’s largest operators of tankers and LNG vessels and a player in offshore support services. This expansion has proved vital to Petronas’s continued success, with international operations being the largest single contributor to the company’s revenues in recent years, eclipsing oil and gas exports and domestic operations.

The centralized nature of the Malaysian energy industry has aided Petronas in its rapid rise from a new NOC in the 1970s to the notable global energy player it is today. Petronas has benefited from complete control over Malaysia’s hydrocarbon resources since its creation, and has also enjoyed general freedom to pursue its commercial interests with only episodic pressure to contribute to noncommercial objectives.
of the Malaysian government. This insulation from noncommercial demands is due in large part to the fact that Petronas only answers to one boss, the Malaysian prime minister.

Petronas has answered directly to the Prime Minister’s Office since its creation by the Petroleum Development Act of 1974. This highly centralized system gives Petronas the ability to act independently so long as it has the blessing of the prime minister, while Petronas’s ownership and control of Malaysia’s oil and gas resources provides a strong asset base with which to finance the company’s operations and expansion plans.

The corporate nature of Petronas has also been a key to its success. Petronas was purposefully created as a corporation and not a government body, in part to avoid criticism that the new NOC was a means of nationalizing Malaysia’s oil and gas resources. Petronas keeps any profits that it earns and pays taxes to the government on the same terms as other oil and gas companies operating in Malaysia. The government does not demand royalties or other types of payments from Petronas beyond the dividends it receives as a shareholder. This setup has allowed Petronas to act for the most part as a commercial, profit-seeking enterprise, which has helped it cooperate and compete with IOCs on the international stage. It has also helped Petronas cultivate a well-regarded management and a professional, technically skilled workforce.

Petronas’s international expansion reflects many of the factors in the Malaysian energy industry and Petronas’s corporate culture that have contributed to the company’s success. Petronas’s professional leader-
ship recognized early on that Malaysia’s domestic oil reserves were declining and could not be replaced over the long term even with aggressive exploration. Expansion of exploration and production overseas was therefore critical to replacing Petronas’s reserves, and plans were developed to undertake this effort. These plans won not only the blessing of then-Malaysian prime minister Mahathir Mohammad (1981–2003)—the only possible veto point in the system—but his active support as a buttress to his own efforts to raise Malaysia’s profile on the international stage. With the prime minister on board, Petronas was given free rein to develop its international operations as it saw fit, to great success.

The success of Petronas has resulted in the company being cited as a model for other NOCs to emulate. The centralized structure of the Malaysian energy industry certainly has some merits, but there are potential downsides to strong central control that Petronas has avoided largely due to the restraint of key institutional actors. The total control Petronas enjoys over Malaysia’s hydrocarbon wealth makes it a tempting target for political leaders hoping to fund broader social and economic objectives.

Petronas has not been completely immune from pressure to contribute to noncommercial objectives of the government. Beginning under Mahathir, Petronas was conscripted to fund prestigious mega-projects in Malaysia, and to provide capable management and financing to rescue other government-linked companies.

Not all of these efforts have been a burden on Petronas. The 1997 acquisition of MISC and subsequent purchase of a Mahathir-linked shipping company was financially successful and helped Petronas make its move into the shipping business. The twin Petronas Towers in Kuala Lumpur (which opened in 1997) are also seen as a success. The benefits of other projects for Petronas are less clear. Petronas probably did not recoup its investment in the 1984 and 1989 bailouts of state-owned Bank Bumiputra, and the construction of a new administrative capital in Putrajaya is widely viewed as a boondoggle, as was Petronas’s brief investment in troubled national automobile manufacturer Proton in 2000.

While Petronas, like most NOCs, faces pressure to contribute to pet projects as part of its socioeconomic responsibilities, it does have the benefit of only having to participate in the pet projects of the prime minister, who shields Petronas from pressure from other political actors. The prime minister’s office has also remained mostly uninvolved in Petronas’s core business activities, and this relatively hands-off approach has given Petronas a great deal of independence in its day-to-day operations.
Petronas leadership in the past has also shown the ability to push back against prime ministerial directives (such as a proposed 1999 investment in ailing Malaysian Airlines), but this freedom has been lessened under current Prime Minister Najib Razak (2009–present). Najib quickly asserted his control over Petronas by pushing out longtime Petronas CEO Hassan Marican in 2010 after a disagreement on a Petronas board appointment, and is seen as playing a more interventionist role in Petronas operations than past prime ministers.

Increasing politicization could be a long-term threat to Petronas’s professionalism, attractiveness as a partner in international joint ventures, and ability to act as a commercial-minded company, particularly if the long-ruling United Malays National Organization (UMNO) party decides to utilize Petronas as a cash cow for political patronage purposes rather than as an occasional source of funding for prestige projects and the bailout of key state-linked companies. There is little indication that such a shift in the government’s relationship with Petronas is imminent, however, and the success of Petronas under the generally hands-off supervision of previous prime ministers makes a strong argument that continued restraint is in best long-term interest of Malaysia, which relies on Petronas’s tax payments for much of its government revenue.

Petronas will need quality leadership to deal with the impact of continued low oil and gas prices on its bottom line, as well as navigate the difficulties facing some of its highest-profile international joint partnerships. Petronas’s plan—in partnership with Sinopec, JAPEX, Indian Oil Corporation, and PetroleumBRUNEI—to build a $27 billion LNG export terminal in western Canada remains in limbo due to public opposition in British Columbia and the new economic reality caused by the fall in LNG prices. Petronas is also seeking to finalize the terms of Saudi Aramco’s involvement in its largest downstream project, after Aramco signed an agreement in February 2017 to buy a 50 percent stake in the Refinery and Petrochemical Integrated Development (RAPID) project during the Saudi king’s visit to Malaysia.
**Pertamina**

Indonesia's Pertamina was created in 1968 by the merger of national oil companies Permina (1957) and Pertamin (1961). Pertamina is a useful contrast to Petronas because the two companies are pursuing similar goals in the context of vastly different bureaucratic structures and with much different levels of industry influence. Comparisons between the two NOCs are instructive for this reason, but also because of the past similarities between the two companies.

Much like Petronas today, Pertamina at its creation controlled Indonesia's hydrocarbon resources, operating as both a regulator and a producer, and answered to only one person, then-president Suharto (1967–1998). Pertamina was one of the world's largest corporations by 1974—when Petronas was created based in large part on the example of Indonesia's NOC—and longtime Permina/Pertamina director Ibnu Sutowo (1957–1976) operated with almost total independence thanks to a close relationship with Suharto.

It is an irony of history that Pertamina collapsed in 1975, shortly after Petronas was formed in its image. Sutowo—who had used his autonomy to expand Pertamina haphazardly beyond oil and gas into steel, construction, real estate, insurance, shipping, agriculture, and more—suddenly found himself unable to pay back his creditors. Pertamina, which had long been a vital cash cow for Suharto and the army, now required government intervention to repay over $10 billion in outstanding debt. Suharto kept a tighter leash on Pertamina after 1975, and the company remained the central player in Indonesia's energy industry until the end of the Suharto regime in 1998.

The origins of Indonesia's present energy industry structure lie in the chaotic years that followed Suharto's fall. Pertamina, which had long been used to funnel money to the Suharto family and military, found itself a prime target for reform efforts. An oil and gas law passed in 2001 stripped away Pertamina's governmental and regulatory functions, and redirected the government's share of oil revenues (which had previously passed through Pertamina) to the central bank. Pertamina also lost its special legal status and was converted to a normal state-owned enterprise in 2003.

The decentralized structure of the Indonesian energy industry today reflects the broader decentralization of power in post-Suharto Indonesia. Pertamina's former role in managing the Indonesian oil and gas industry is now spread across several government ministries and regulatory bodies. Energy policy and industry regulation is now managed by the Ministry of Energy and Mineral Resources, which ultimately answers to
the president through an intervening Coordinating Minister for Maritime Affairs. Pertamina, on the other hand, is managed by the Ministry of State-Owned Enterprises, which answers to the president through the Coordinating Minister for Economic Affairs.

The Special Taskforce for Upstream Oil and Gas Business Activities (SKK Migas) now fulfills the upstream regulatory role once played by Pertamina, which includes the licensing of new field development, setting the terms of contracts with foreign operators, and serving as the government representative for PSCs negotiations. The Downstream Oil and Gas Regulatory Body (BPH Migas) similarly filled Pertamina’s former role in downstream regulation, which includes regulating the supply and distribution of fuels and the transmission of gas via pipeline. Pertamina also lost its former monopoly on the distribution and sale of fuel in Indonesia.

Several other players outside the executive branch also influence the energy industry in Indonesia, either directly or indirectly. The lower house of the Indonesian legislature—the People’s Representative Council—plays a key role through both its law-making authority and the oversight role played by its Commission VII (responsible for energy issues) and Commission VI (responsible for state-owned enterprises).
The judicial branch plays a more limited role, although the Constitutional Court did dissolve the predecessor body to SKK Migas in 2012 after declaring it unconstitutional. Indonesia’s Corruption Eradication Commission also influences behavior by monitoring the energy industry. The corruption commission convicted a former head of SKK Migas in 2014, and the current SKK Migas head is a former corruption commission official.

This complex and decentralized system achieves many of the goals set in the early 2000s by Indonesian democratic reformers, who sought to separate control of policy, implementation, and revenues in the energy industry to eliminate rampant corruption and other abuses. These reforms necessarily resulted in a major change in Pertamina’s role in the Indonesian energy industry and a reduction in its ability to achieve many of the objectives generally expected of NOCs.

Pertamina no longer enjoys most of the advantages that NOCs traditionally receive that enable them to carry out their role as national champions providing socioeconomic benefits for the state. Despite these limitations, Pertamina still faces pressure from the government to meet noncommercial objectives that would be onerous even for a NOC in full control of its domestic market. An example of this is the requirement that it implement a “one-price policy” that will set a uniform fuel price throughout a sprawling archipelago with widely varying levels of infrastructure development.

Pertamina, like Petronas, also faces the challenge of replacing its reserves as Indonesia’s domestic oil and gas reserves decline. While Indonesia has greater domestic reserves remaining than Malaysia, Pertamina must compete with both IOCs—Chevron is Indonesia’s largest oil producer and Total is the largest gas producer—and other Indonesian producers to develop those resources. To succeed in this very competitive market, Pertamina must continue to develop its expertise in exploration and production operations, which were somewhat neglected in Pertamina’s heyday as the company was primarily focused on supervising the production of IOCs operating in Indonesia under PSCs.

Pertamina is working to expand its international operations, which is necessary over the long term to replace its reserves, but these efforts may be hampered by a lack of capital caused by Pertamina’s lost access to government oil revenues and continuing need to spend money in support of noncommercial objectives. This reality is pushing Pertamina toward overseas joint ventures with other oil and gas companies, including production operations in Algeria, Iran, and Iraq. Joint ventures with Saudi Aramco and Russia’s Rosneft are also being pursued to expand Pertamina’s valuable refining business.
The downstream sector as a whole, where Pertamina has retained a much greater market role, is an important growth area and an increasingly important contributor to Pertamina revenues since the Indonesian government reduced fuel subsidies in 2015.

Proposed reforms of the energy sector in Indonesia could also boost Pertamina’s ability to compete on the international stage. The legislature is currently considering revisions to the 2001 oil and gas law that would merge SKK Migas and BPH Migas into Pertamina to create single government agency governing the upstream and downstream sector, giving back Pertamina much of the governmental and regulatory power it lost in 2001.

There are also plans to restructure Indonesia’s state-owned enterprises that, if implemented, would help improve Pertamina’s finances. While the details of the plans are in flux, most versions have Pertamina merge with state-owned gas transmission and distribution company PGN and serve as the holding company for all state-owned oil and gas assets. Some more grandiose versions have state-owned power producer PLN also folded in to create a holding company for all of Indonesia’s state-owned energy assets, but this seems unlikely given PLN’s opposition and strong political position.

Even if these reforms do not come to fruition, Pertamina’s position will improve to 2030 as it inherits significant oil and gas assets as a result of a May 2015 Energy and Mineral Resources Ministry regulation that gives Pertamina priority in the management of hydrocarbon blocks whose production contracts with IOCs had expired. The upcoming transfer of control over the Mahakam block on the eastern coast of Borneo—Indonesia’s richest gas block—from Total to Pertamina in January 2018 will be a key test of this new policy and Pertamina’s ability to successfully manage and operate a very large and complex production block.
PTT

Thailand’s PTT (formerly the Petroleum Authority of Thailand), founded in 1978, occupies an interesting middle ground between the highly centralized bureaucratic structure overseen by Petronas in Malaysia and the highly decentralized bureaucratic structure Pertamina must navigate in Indonesia. Thailand, despite setting up its NOC after both Indonesia and Malaysia, has remained aloof from innovations spearheaded by its neighbors, retaining a more traditional industry structure and contracting system while setting the pace in the region for the privatization of national energy companies. This independent approach has worked for Thailand and PTT, which rivals Petronas in terms of revenue and has a similar reputation for professionalism, while lacking Petronas’ global reach.

**Thailand’s Energy Industry**

Thailand’s energy industry has a relatively simple bureaucratic structure, with PTT answering to the prime minister only through an intervening energy minister. The state—not PTT—controls Thailand’s hydrocarbon resources, and the Ministry of Energy is responsible for setting policy. The relatively new Energy Regulatory Commission (established
in 2007) regulates the energy industry. These regulatory functions are less involved in Thailand than in Malaysia and Indonesia because Thailand has stuck with a concessions-based regime for awarding production contracts rather than switching to a PSC regime.

Under this system, created by the 1971 Petroleum Act and Petroleum Income Tax Act, producers are awarded concessions to oil and gas blocks and control whatever hydrocarbons they extract. In return, the producers pay a concession royalty (5 to 15 percent, increasing with the amount produced), a petroleum income tax (50 percent of net income), and a windfall profit tax in certain cases. Producers are also required to make certain nontax payments at certain points of their contracts, which include both bonus payments and contributions to scholarship and economic development programs. These terms give the Thai government a significant take of producer income, but are generally more favorable than the terms offered by other Southeast Asian nations operating under a PSC regime.

PTT does not enjoy a privileged position as a domestic producer under this system, and IOCs are active in the exploration and production of Thailand’s oil and gas. Chevron is the largest operator in Thailand, followed by PTT (under its exploration and production subsidiary). Where PTT does enjoy a privileged position is in the distribution and transport sector, particularly the transmission of natural gas through its network of pipelines. PTT is also the dominant player in Thailand’s refining, petrochemical, and retail sales sectors.

PTT acts as the monopoly purchaser, transporter, and distributor of natural gas produced in Thailand, which gives it substantial market power in setting prices for consumers of natural gas. The largest consumer of natural gas in Thailand is the state-owned Electricity Generating Authority of Thailand (EGAT), which also answers to the Ministry of Energy and is the monopoly power producer in Thailand.

Ironically, PTT’s sister state-owned enterprise is the biggest potential challenger to its monopoly on gas transmission. While PTT’s control of domestically produced gas is under no real threat, Thailand’s growing reliance on natural gas imports has provided an opening for EGAT to gain greater control over its supply of gas. EGAT last year submitted a plan to set up a new business to buy LNG directly from Middle East suppliers and spot markets, and to develop its own floating storage regasification unit (FSRU) in the Gulf of Thailand. While the project has yet to advance beyond the planning stage, it is an example of the type of challenge growing LNG imports could pose to PTT’s core gas transmission monopoly.
PTT, like most NOCs, has not been immune to the influence of domestic politics. In PTT’s case, however, the political influences may have inadvertently helped the company develop into the professional and respected company it is today. The Thai government was dominated by technocrats in the 1990s, which helped imbue PTT with a nonpolitical and professional management culture. The shock of the 1997 Asian Financial Crisis led these technocrats to propose serious reforms to the Thai energy industry, including the privatization of state-owned enterprises PTT and EGAT, but these reforms were stymied by domestic opposition until the rise of the strong populist government of former Prime Minister Thaksin Shinawatra (2001–2006).

While the Thaksin government only implemented some of the recommended reforms and the reforms that were initiated were criticized as unfairly benefiting Thaksin’s political supporters, it did succeed in partially privatizing PTT in 2001, selling off 49 percent of the company. The privatization survived a 2007 court challenge, although PTT was required to transfer ownership of its pipeline network to the Ministry of Finance, to which PTT must now pay an access fee while retaining de facto control of the pipelines.

PTT’s status as the only publicly listed NOC in Southeast Asia provides it with external pressure from shareholders to maintain its professionalism and competitiveness with other NOCs and IOCs. While not as active globally as Petronas, PTT has a respectable international presence, with exploration and production projects in 10 countries. PTT also has a large number of publicly listed subsidiaries, including PTTEP in the upstream sector, PTT Natural Gas Distribution Co. in pipeline construction, and Thai Oil, IRPC, and PTT Global Chemical in the refining and petrochemical sector. PTTEP’s overseas activities are concentrated in Southeast Asia, but also include projects in Algeria, Brazil, Canada, and Mozambique.

Thailand has clearly bucked regional trends in the management of its energy industry, but it is hard to argue with the performance of this system. Thailand has steadily increased its production of both oil and gas since 2000, despite having less favorable geological conditions than many of its neighbors and dealing with the declining production of its best fields. This success may be explained, in part, by the continued reliance on a concessions-based contracts regime and openness to IOC exploration and production that attracts the expertise and investment needed to tap Thailand’s increasingly harder to exploit reserves.

The stable and successful Thai energy industry may be in for a shake-up in the next few years, however, as the current military government passed an amendment to the 1971 Petroleum Act in March that paves

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the way for the introduction of PSCs in Thailand as existing concessions come up for renewal, with two of the largest gas concessions set to expire in 2022–23. It is not yet clear if PSCs will replace or merely exist as an option alongside the traditional concession approach, or who will negotiate and manage PSCs for the Thai government.
Bibliography


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