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Indonesia Coalbed Methane: Bountiful Promise Held Up By Institutional Paralysis

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SYNOPSIS

The publication of a report in 2003 which claimed that Indonesia has some of the best undeveloped Coalbed Methane (CBM) potential in the world brought an initial wave of excitement and optimism to the Indonesian government and investors. However, subsequent CBM production has been slow to pick up and has fallen far behind government targets due to the institutional paralysis facing Indonesia. Sentiments among the government, operators and investors have since dampened. Any attempts by the new in-coming president, Joko "Jokowi" Widodo to fast track CBM development will likely result in limited success.

KEY POINTS

- The long term potential of CBM development in Indonesia is being undermined by short and medium term constraints, with political power play mainly responsible for the current institutional paralysis plaguing Indonesia.
- Despite the country's huge CBM resource potential and initial investors' excitement, CBM production in Indonesia has been disappointing as many projects have faced delays leading to production targets not being met.
- The longer than expected timeframes involved in executing the CBM projects has led to mounting costs for the operators, which has in turn, affected investor confidence.
- To accelerate CBM development, the new Jokowi administration must enable greater cost effectiveness and project flexibility by addressing the licensing and fiscal regimes, the regulatory and bureaucratic constraints and procurement restrictions faced by CBM operators.
- Jokowi's marginal victory during the Presidential election and lack of a working majority in the Indonesian Parliament mean that plans to fast track CBM developments in Indonesia will likely result in limited success.

INTRODUCTION

Indonesia is a major natural gas producer and exporter. The country ranked the 13th largest holder of proven natural gas reserves in the world and the second largest in the Asia-Pacific after China in 2013, according to the US Energy Information Administration. It was the largest LNG exporter in the world until 2006 when that title was taken by Qatar. In 2013, it ranked the 4th largest LNG exporter in the world. This drop in export volume is driven simultaneously by two domestic developments: first, gas production is falling - it has dropped to below 2009 levels following three years of consecutive decline; and second, domestic gas consumption has doubled since 2005. The natural gas industry is regarded as vital to the Indonesian economy and the government must strike a balance between boosting export revenue from the sale of natural gas overseas and meeting rising domestic demand.

With the decline in conventional natural gas supply, the government has been encouraging CBM production. Indonesia is believed to have

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one of the world's largest CBM resources with a reported total speculative resource of 12.8 tcm distributed over 11 onshore coal basins, mainly in Sumatra and Kalimantan. The first CBM Production Sharing Contract (PSC) was signed in 2008 and 54 CBM PSCs have been signed to date. The government initially set an annual production target of 5 bcm by 2015, 10 bcm by 2020 and 15 bcm by 2025. However, in March 2014, it was reported that CBM production was only about 0.007 bcm in 2013 and that the government had decided to drastically lower the CBM production target to just 0.1 bcm for 2015 and 0.25 bcm for 2020. This revision reflected the scant progress made by the operators and the fading investor excitement over CBM production prospects in the country.

ANALYSIS

Positive Long Term CBM Prospects Fuelled Initial Excitement

There was initial government optimism and investor excitement over the development of CBM resources in Indonesia. It was hoped that these would contribute to the country's efforts to ramp up its gas production. Besides the state-owned Pertamina, a range of CBM operators, from oil majors such as Total, BP, ENI, ExxonMobil and Santos, to independents like Dart Energy, NuEnergy, Medco Energi and CBM Asia were attracted, as well as smaller local players like Ephindo Energy and Star Energy.

The initial optimism about the long term market opportunities of Indonesia's CBM was fuelled by a number of key conditions. First, the geological conditions in the country are favourable for CBM production. Second, domestic demand for natural gas has been growing significantly. Third, most CBM deposits are concentrated in Sumatra and Kalimantan, and already have existing oil and gas operations and infrastructure in place to deliver the product to the domestic (mainly in West Java) and Asian gas markets.

Fourth, the government appeared to be supportive of this new resource. It passed new legislation to stimulate the development of unconventional resources, including CBM. In Law No. 30/2007, CBM was designated as a source of "new energy", which refers to energy sources produced by new technologies that come from both renewable and non-renewable energy sources. Under this law, the government is expected to provide facilities and incentives to enhance the PSC, allowing for a production sharing split with 45 per cent for investors on an after tax basis, compared to 15 per cent for oil and 30 per cent for conventional natural gas. As a sign of the government's commitment towards CBM development, the Indonesian Minister of Energy and Mineral Resources attended the first CBM PSC signing in 2008.

Fifth, CBM development in Indonesia is said to have low exploration costs compared to conventional onshore drilling. One analyst referred to CBM investments as "low risk and low cost with potential high returns" due to the low capital required to acquire a PSC and complete the first exploration phase. There was a belief that the industry would eventually consolidate with early investors cashing in on the increased valuation of the CBM assets after the pilot production projects reach an early stage of production and cash flow.

In March 2011, CBM development in Indonesia hit a milestone when CBM from the Sanga-Sanga CBM PSC block operated by VICO - the joint venture by BP and ENI - in East Kalimantan, was exported via the Bontang LNG Plant, becoming the world's first CBM to LNG project. In April 2013, CBM produced from the same block was delivered to the state-owned PLN gas-fired power plant in Mutiara, providing electricity for around 2000 households. This was the first time CBM had been used to generate electricity and it marked another milestone by demonstrating CBM's potential in feeding the country's domestic gas demand.

Lack of Progress on the Ground Has Dampened Sentiments

Despite the initial excitement and reaching of milestones by VICO, it became evident in 2013 that a number of CBM projects had begun to stall. In December 2013, CBM Asia announced that ExxonMobil was exiting the firms' CBM projects in South and East Kalimantan, a year after the two parties signed a joint venture agreement. As of March 2014, only 84 CBM wells had been drilled by 18 PSC contractors, which falls well short of the minimum PSC

drilling obligations of 384 corehole and pilot wells expected in 2013, and far behind the 420 committed by 2015.

While it is true that CBM commercialization is still in an early phase, institutional constraints in several areas have prevented the majority of CBM operators from carrying out their activities as planned, resulting in below-target exploration and production. This has translated into mounting costs for operators, delays in the commercial appraisal of the CBM blocks, which has in turn affected investment sentiments. The recent interest in Indonesia's shale gas prospects has also shifted both investor and government attention away from CBM development. Ultimately, these factors undermined the CBM targets set by the government, resulting in the reappraisal of the CBM production targets.

Current Obstacles to CBM Development

For the successful development of CBM in Indonesia, the following "above-ground" challenges need to be addressed. They are broadly divided into three categories: licensing, regulation and bureaucracy, and procurement.

Incompatible Licensing

The Production Sharing Contract system and the cost recovery and revenue tax regime (under GR No. 79/2010) applied to CBM operations is unsuitable because of the operational and commercial characteristics of CBM development. Under the PSC system, CBM operators must submit annual work programmes and related budgets. However this system, created for conventional oil and gas projects, is not suited to CBM operations which require a high degree of flexibility in their exploration activities. Results from an existing CBM well are used to determine the location and number of wells to be drilled next, so a fixed annual plan is not suitable.

In terms of cost recovery, the contractor is expected to bear full financing of the operations as well the full risk. More importantly, cost recovery is made only after contractors enter the production stage. Such fiscal terms are designed for conventional large-scale projects aimed at export markets, rather than CBM operations which are unconventional and small-scale projects geared towards domestic buyers.

Complex Regulations and Lengthy Bureaucratic Processes

The central government has demonstrated its intention to develop the country's CBM potential by issuing supporting laws, decrees and regulations. However, these often conflict with local regulations, resulting in confusion over the respective roles and responsibilities of the central and local authorities. The ambiguous distribution of power at different levels of government meant that operators often encounter local resistance when trying to develop the blocks they have been awarded, where local governments are the de facto rulers, with some engaged in rent-seeking behaviour.

Operators have also complained about the bureaucratic process and associated delays in getting permits related to land access and exploration from various issuing authorities at different levels of government. These range from securing a Location Permit from the land office of the local government, to obtaining permits on hazardous waste management from the Environmental Impact Management Agency, to Borrow-and-Use permits (Pinjam Pakai regulation) to access forested areas from the Ministry of Forestry. One estimate indicated that it can take over 400 days to obtain approval, excluding the environmental permit. In addition, operators receive insufficient support from the upstream oil and gas regulator when they encounter problems. Also, the on-going corruption investigations surrounding key figures in the Ministry of Energy and Mineral Resources and the upstream regulator, SKK Migas, have added another layer of uncertainty to the investment landscape.

Procurement Restrictions

Operators face bureaucratic and restrictive processes when attempting to procure drilling equipment for CBM operations. The procurement regulation set out in 2011 as PTK 007 (BPMIGAS' No. 7/Revisi-II/PTK/I/2011) and subsequently made more stringent in 2013 through MEMR Regulation No. 15/2013 prioritized local content even though there were no domestic rigs designed specifically for CBM operations available. As a result,

operators have difficulty securing fit-for-purpose equipment and are instead using modified conventional rigs, adding to their transaction costs.

Jokowi's Weak Mandate, Power Play and Institutional Paralysis

The long term potential of CBM development in Indonesia is currently undermined by short and medium term constraints, with political power play mainly responsible for the existing institutional paralysis. The problems encountered by the CBM industry are not due to the lack of government understanding of the various constraints encountered by CBM operators, but stem from poor coordination among ministries and between different levels of government, from the lack of an effective implementation system, as well as power struggles among the political elite.

Indonesia's new president, Jokowi, has plans to address Indonesia's energy crisis by reforming the energy sector to make it more market-friendly but he is likely to encounter the same institutional challenges as his predecessor. In Indonesia, the Executive Branch is relatively weak compared to the Legislature. The President can propose or veto bills but the laws have to be passed by the House of Representatives (also known as the Dewan Perwakilan Rakyat, DPR) in Parliament.

Jokowi achieved a marginal victory in the Presidential election and also lacks a working majority coalition in the DPR. He will either have to enter into a cohabitation arrangement with a Parliament dominated by the old political elite with entrenched vested interests, or face political deadlock as a hamstrung president. Observers have also questioned whether he will be a "controlled" leader under his political patron, Megawati Soekarnoputri, who heads the Democratic Party of Struggle (PDI-P) and belongs to the traditional political elite.

Jokowi has indicated plans to reform the energy sector by bureaucratic streamlining, amendment of laws and regulations, and change of policies. For instance, he has expressed willingness to consider more flexible fiscal incentives based on exploration difficulties and development areas. These reforms, if successful, could fast track CBM development in Indonesia. However, given the birfucation of political power in Indonesia and his weaker than expected popular mandate, Jokowi, in his present state, does not have sufficient political cache to fully push through the necessary reforms to fast track CBM development.

WHAT TO LOOK OUT FOR

- A grand bargain with the opposition-controlled Parliament or having new coalition members who defect from the opposition camp will enable Jokowi to pursue a limited reform agenda, including fast tracking the development of "new energy" resources such as CBM and shale gas.
- Government measures to help CBM operators procure the necessary fit-for-purpose CBM equipment, such as rigs, through active support of the local manufacturing industry, or by allowing imports.
- Whether the latest excitement over Indonesia's shale gas development will further stall CBM development as investors look to Indonesia's shale gas prospects instead.

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This brief is part of the Energy Studies Institute's project on non-geological constraints on unconventional gas developments in East Asia. To learn more about this research, visit the ESI website.