

# Petrobangla, BAPEX Must Undergo Structural Reform To Ensure Energy Security

**B**angladesh's economy is heavily reliant on natural gas, making energy security a critical concern for the country. Achieving this security necessitates both extensive domestic exploration and the development of infrastructure for liquefied natural gas (LNG) imports. However, the existing operational framework of Petrobangla and BAPEX is insufficient to meet these demands. To ensure energy security, these institutions must undergo structural reform based on a comprehensive re-evaluation of current operations. Furthermore, boosting domestic gas production requires rigorous studies to accurately assess current reserves and identify the untapped potential of all gas fields. Failure to prioritize these measures will likely exacerbate future energy shortages. Importing expensive LNG at best will provide a short-term fix but no panacea for long-term energy needs.

In an interview with Mollah Amzad Hossain, Editor of Energy & Power, Ahmed Hussain, Business Director (Asia) of Oilfield Production Consultants (OPC) UK, shared his insights. Mr. Hussain has amassed 40 years of experience in oil and gas exploration, both in Bangladesh and internationally.

**You commenced your career with Bangladesh Gas Field Company Limited during the period when Bangladesh had recently acquired five gas fields from Shell. Could you elaborate on your experiences from that time?**

After completing my Masters studies in the United Kingdom, I naturally sought employment in the UK oil sector. I developed a relationship with some mentors in Shell, who advised me to commence my career in Bangladesh, to contribute to its developing gas industry. Consequently, I joined Bangladesh Gas Field Company where I swiftly ascended to the position of Field Operations Manager. At that time, Shell's experienced workforce was in the process of handing

back the management to the local professionals. They were skeptical about our ability to effectively manage operations in their wake. Shell's Field Manager, Vander Kemp, explicitly stated, "You won't be able to do it. We will have to come back."

Our leaders at the time were Mr. Jamal Uddin and Dr Nazrul Islam, who chaired Petrobangla. At that stage, only Wells 1, 2, and 3 of the Titas field were operational. We undertook the task of reviving the decommissioned Well 4, using a rig that Shell had left behind. We simultaneously initiated drilling operations at Location 5 in Titas with support from ODA funding and BP.

During the drilling process, we encountered a fishing incident that required an immediate and decisive response. As a junior executive, I found myself suddenly responsible for making a critical decision to sidetrack the well. This resulted in urgently flying in special tools on a sole cargo plane from Singapore, ultimately leading to the well's successful completion. Such experiences were invaluable in those formative years.

I have since been fortunate enough to work in some of the most high-profile fields for major operators and national oil companies in the technical capacity of Reservoir Engineering Advisor, and then as Subsurface Manager. I have worked in the North Sea, all of the major Gulf national oil companies (ADNOC, QP) including the Ghawar field (the largest known oil field in the world) for Saudi Aramco. I have also worked for BP, CEPSA, OMV as well as Britoil where I started my international career.

**The five gas fields acquired from Shell were considered to have international-grade reserves. Except for Bakhrabad, the others remain in production. Would you agree that these fields formed the foundation of Bangladesh's gas sector?**

There can be no doubt regarding their



Ahmed Hussain

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foundational significance. Unfortunately, due to inexperience and mismanagement, the Bakhrabad Field was prematurely shut down. However, the other fields may still hold considerable potential, if the correct field development and management practices are in place. Since those initial discoveries, only one field of comparable quality, called Bibiyana, has been identified. While Bibiyana has maintained consistent production through advanced technology and expert management, the domestic gas fields have not been managed with the same level of technical expertise.

**Despite possessing larger reserves than Bibiyana, fields such as Titas and Rashidpur produce only a fraction of Bibiyana's output. Do you believe that domestic operators can swiftly enhance production levels?**

The disparity between production levels

and reserves in place is indeed alarming, yet there is no immediate solution. Without comprehensive field development studies, it is difficult to determine whether operators can easily increase production capacity.

We would need to begin with a detailed reserve study of all existing fields, using an agreed set of subsurface data, to be performed by a world-class consultancy. Such an evaluation would require at least a year to complete. Once we have this data, we can then accurately assess the feasibility of increasing production. I recommend the government initiate this study without further delay.

***Current domestic gas production is below 1,900 MMCFD, with the Bibiyana field contributing over 900 MMCFD. There are concerns that Bibiyana's production could decline drastically. What is your assessment?***

I do not foresee an abrupt decline in Bibiyana's production. International oil companies determine production schedules based on rigorous surveys and reservoir studies. However, it would be prudent to engage with Chevron to explore the surrounding areas for additional potential, conduct a 3D survey where necessary, and initiate new drilling activities. Such measures could extend the field's productive lifespan. In any case, a decline in production would be gradual rather than sudden, given Chevron's use of advanced technology and highly skilled personnel.

Furthermore, the government could collaborate with Chevron to leverage its expertise in enhancing production from other domestic gas fields.

***Large-scale exploration is crucial to resolving Bangladesh's gas crisis. What role can BAPEX play in this effort?***

It is important to acknowledge the contributions of BAPEX and its workforce. However, on a global scale, BAPEX remains a troubled institution, hindered by mismanagement, corruption, a lack of international experience, and ongoing training. The organization is not only incapable of conducting independent exploration but cannot also oversee the work of third parties. This inadequacy was evident when Gazprom's drilling projects failed to deliver the expected production results.

In my professional opinion Petrobangla, in its current form, should be dissolved. A

new management team, comprising skilled personnel with extensive international experience, would be better stewards of the countries' crucial assets. Likewise, BAPEX requires significant structural reform to improve production. Without these measures, Bangladesh will continue to struggle to achieve meaningful progress in oil and gas exploration.

To facilitate this transformation, the government should commission a qualified foreign consultancy firm to evaluate BAPEX and Petrobangla and propose a restructuring strategy. The recommendations of such a study must then be rigorously implemented.

***The government has announced plans to drill 150 wells by 2028. So far, only 16 wells have been completed, leaving 134 wells to be drilled within four years. Do you consider this target achievable?***

I am skeptical about the feasibility of this plan. The success of such an initiative is contingent on the accuracy of the site selection process, an approved realistic drilling program, and agreements with relevant drilling partners. In my assessment, BAPEX and its contractors currently have the capacity to drill no more than 10 wells per year. The current logistical, planning, and execution challenges are a formidable challenge. Consequently, it is highly unlikely that even half of that target will be met within the proposed time frame, utilizing available resources.

***Petrobangla asserts that the locations for exploration wells were finalized based on 2D and 3D seismic data analysis. Why do you question the reliability of this approach?***

If I'm not mistaken, seismic studies were conducted for the majority of the fields back in the 1960s and 1970s. These would have been mainly in 2D, which is just not fit for purpose in modern field production. After nearly four decades of experience in oil and gas exploration, I have assessed that most of that data is woefully out of date.

Since Shell's departure, a significant portion of Bangladesh's seismic data has been collected using Chinese technology or through Chinese contractors. While China has made significant advancements in various technological domains, they are not recognized as major in the oil and gas

sector. Therefore, a lot of their field data may not hold up to internationally recognized standards. The suboptimal results from Gazprom's development wells, which were based on such seismic data, provide clear evidence of this issue.

Therefore, these plans are reviewed by industry-recognized institutions before implementing Petrobangla's exploration initiatives. Otherwise, they will continue to fall short of the anticipated success in oil and gas exploration, even if partnering with experienced operators.

***The recent offshore bidding process did not receive any response. Given these circumstances, do you believe a second bidding round will yield better results?***

Investor confidence in Bangladesh's energy sector has been eroded by political instability, opacity in oversight, corruption and political interference, and mismanagement. Additionally, recent contract cancellations and outstanding dues owed to power and energy companies have further eroded both investor and vendor confidence. As a result, Bangladesh is currently not viewed as an attractive investment option for international oil companies (IOCs).

Rather than merely issuing another bid invitation, Petrobangla should proactively engage with potential investors and initiate direct discussions to improve business confidence. Thus, transparency can be maintained while ensuring that potential partners align with national interests. There may also be a requirement for incentives or favorable business terms to attract more interest. I understand the current Production Sharing Agreement (PSA) policies are under review. This approach is likely to yield better results augmented by a competent marketing and negotiating team.

***What will be your final thoughts about Bangladesh's oil and gas sector?***

Bangladesh's energy security is at a critical juncture. Without swift and decisive reforms within Petrobangla and BAPEX and strategic engagement with international energy companies, the country will struggle to meet its growing domestic energy demands. The path forward requires extensive restructuring, targeted investment in advanced exploration techniques, and robust governance mechanisms managed by a highly experienced team, to manage the sector effectively.

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