

Energy Sector Scenario of Bangladesh

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The present energy supply situation and apprehensions over deepening the crisis are due to a combination of years of gross negligence of policymakers to prioritize exploration and exploitation of domestic fuel resources. Without assessing the depth and diversity of the challenges, the policymakers opted for increasing reliance on imported fuel keeping precious coal and petroleum resources buried underground. Relevant experts kept repeatedly alerting the government of dire consequences. But all went unheeded. Policymakers did not even enhance the capacity of Petrobangla and its companies to advance toe in toe with the power sector. Bangladesh moved away from the self-reliant energy philosophy of the father of the nation. People may also question the sincerity of the policymakers in getting out of the crisis. The obvious consequence is that with over 29,000MW installed power generation capacity (grid, non-grid, import, and renewables), the government has no clue how to meet 16,500-17,000MW peak power load in the ensuing summer. The extended tenure of the Speedy Power Supply Act evidences that the crisis is not yet over. In the present business-as-usual process, it is extremely difficult to comprehend how the emerging crises of 2024 and 2025 will be managed.

Present Situation

If we research on power supply chain, we find power generation capacity has

grown huge with an unmanageable reserve margin. But in the process of increasing generation capacity, not much attention has been given to assured fuel supply, expansion of the power transmission grid, and modernization of the power distribution network. Geographical challenges constrain Bangladesh from setting up expensive infrastructure for fuel imports. The developing economy cannot absorb the price shock of the global fuel market, growing volatile due to various geopolitical events. Bangladesh followed the wrong policy in exploring and exploiting local fuel resources. Very high-quality coal resources (less sulfur, low ash, and high-heating value) remain virtually unexplored. Petroleum resources onshore and offshore have not been explored. These have led to state-owned enterprises like BPDB, Petrobangla, and BPC almost going bankrupt with huge outstanding payments. The government cannot afford to pay huge subsidies to the power and energy sector. However, we are not ignoring the impacts of the COVID-19 pandemic, the Russia-Ukraine war, and Israel Hamas conflicts. Poor perspective planning, inappropriate implementation strategy, and poor mindset of policymakers also combined in creating the present situation.

The present government is in state power for the fourth consecutive term. Can we compare their achievement

with the achievement of the government of 1996-2001 tenure? If not of the same depth and dimension, a similar crisis of power and energy it inherited in 1996 when after 21 years it came to state power. There was one division of the Ministry of Power, Energy and Mineral Resources (MOPEMR) at that time and not so many senior officials were in the bureaucracy. Yet in 5 years power and energy sector turned around in a well-coordinated and disciplined manner. Some major gas field discoveries were made at Bibiyana, Shangu, and Maulavibazar. Jalalabad Gas Field, Shangu offshore field, Beani-bazar, Salda, and Meghna were connected to the national gas grid. The gas transmission network was extended beyond the mighty Jamuna River. Gas fields of the Northeastern corridor were connected to the national grid by expeditiously connecting the Ashuganj hub with the gas grid at the Bakhrabad Gas Field. In the power sector, IPPs, SIPPs, and barge-mounted units were launched. By 2001, the power and energy sector looked dynamic and vibrant. Petrobangla successfully championed all energy sector development, and BPDB did well in all segments of power supply chain management. The spirit of collaboration and participatory development ambiance was missing over the past three terms of the present government. Instead of bottom-up, the top-down management is also responsible for the crisis.



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BPDB has estimated that this summer's peak demand may shoot up to 16,500MW. It has 26,504MW grid-connected power generation capacity, including captive power, off-grid renewable energy & off-grid HFO total installed capacity $(25,929+2,800+418+5)=29,152$ MW. BPDB has 11,580 MW gas-based power generation capacity. It needs a 2300 MMCFD gas supply to keep all its plants going. But Petrobangla is not in a position now to supply more than 1300 MMCFD. That can generate about 6000MW. Consequently, BPDB has no option but to rely on imported coal-based generation and liquid fuel-based contingency plants. It is possible to generate about 5000MW. There is some issue with evacuating full capacity from the Matarbari and Bashkhali power plants. Also, there is a genuine issue of dollar shortage for purchasing coal. Liquid fuel plants are basically for meeting the peak demand. Even then there are huge outstanding payments of IPPs. The government issuing bonds is trying to confront this. But that also may become too little too less. BPDB also owes money to Adani Group supplying power through cross-border connectivity. All these issues were not possibly considered as risks at the planning stage.

There is a wrong belief that coal exploration will create desertification in the coal region, and the aquifer will be impacted. But all coal mines elsewhere in the world did not create deserts. There exists off-the-shelf technology for managing aquifers, managing mine water, and reclaiming agricultural land. Authentic study reports are available to the government. But the uninformed guess of some policymakers keeps the government in dilemma over mining coal. People still showing dreams about underground coal gasification. Even in Queensland Australia UCG was a disaster. State Minister for Energy Nasrul Hamid was briefed about it during his visit to Australia in 2016.

People also misguided policymakers about probable and possible gas re-



sources onshore and offshore. There are so many studies and reports available with Petrobangla about possible gas resources onshore. The entire offshore virtually remains unexplored. From 2000-2023, virtually very little exploration has been carried out onshore. Bangladesh could do very little offshore as well. Relying exclusively on BAPEX for onshore exploration backfired. Even BAPEX was not given the required support for high-risk exploration works. For all these, Bangladesh is now in a chronic gas supply crisis.

Government Actions

Given the present crisis, the present management of Petrobangla has taken some brave initiatives for expediting gas exploration to increase the contribution of own gas to the fuel mix. The remaining work of the planned 46 wells drilling program will be completed by 2025, according to Petrobangla. Then by 2028, another 100 wells will be drilled. Many of these will be exploration wells. These are daunting tasks. We understand Petrobangla will engage foreign drilling contractors. But it is also a reality that BAPEX and Petrobangla do not have enough skilled manpower resources to manage these huge volumes of work. Concurrently, Petrobangla will also need to deal with IOCs to be engaged through PSCs for offshore exploration. It can be sug-

gested to update the MPSC for onshore and engage IOCs through PSC for risk investment. In onshore land, investment, and risk of execution of exploration are huge problems.

Petrobangla has also concluded contracts with Qatar, and Oman for LNG supply from 2026. Contracts have also been concluded with Excelerate Energy and Summit Group for LNG supply. But these will start from 2026. Even additional capacity through a third FSRU contracted to Summit may come into operation in 2026. Talks are ongoing with Excelerate for RLNG supply through a subsea pipeline from their proposed deep-water LNG infrastructure off the shore of Kuakata. There are also talks about RLNG imports from India through pipelines. Notwithstanding Bangladesh's capacity to make payments, none of these will happen before 2026. The greatest concern is meeting fuel demand in the 2024 peak and 2025.

I hope the government will carry out deep soul-searching on what went wrong in planning and executing programs in the energy sector. The issues must be holistically reviewed and addressed. Without energy security, the dreams of developing the economy, smart Bangladesh may not come true.

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