**Energy and Indigenisation drives the economy**

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The Islamic Republic of Pakistan is out of fuel. The discovery of natural gas in 1952 ensured energy security for the country. At 12 Trillion Cubic Feet (TCF), it was one of the largest deposits of the world. Today the land of the pure has an extensive gas transmission and distribution network but is running short of fuel. The shortfall is being met by imported LNG which is expensive and out of the reach of the common man. Fortunately, the 175 Billion Tons of Coal at Thar can provide the much needed relief for the country. With the application of the 21st century ‘Clean Coal Technologies’ (CCT), the harmful environmental effects can also be managed. Indigenisation of technology has also been a big challenge. Both energy and technology drives the economic engine of the nation which requires planning to move forward.

Karachi faces a serious gas crisis today. Being one of the key players in the development of the Thar Coal Reserves, I was invited to discuss the way forward. The Energy Department of the Government of Sindh is keenly interested in resolving the problem. Coal can be gasified to turn into clean fuel called Synthetic Natural Gas (SNG) which can replace the imported LNG. Once gasified, it can have several applications including the production of the Urea Fertiliser and Diesel Fuel. For the last forty years, the Islamic Republic of Pakistan has been a security state with very little focus on human and economic development.

[Dense fog continues to blanket plain areas of Punjab](https://nation.com.pk/26-Jan-2022/dense-fog-continues-to-blanket-plain-areas-of-punjab)

Application and commercialisation of technology that has been developed remains a major challenge. While sophisticated armaments have been produced like tanks and aircrafts, hardly any commercial product like cars, richshaws and cycles have been introduced. During my term at Pakistan Science Foundation (PSF), I took Sohrab—the largest cycle and motorcycle manufacturer in Pakistan—to National Engineering and Scientific Commission (NESCOM) that designs and produces missiles for the Pakistan Army. Using their tools to optimise the bicycle, we could reduce its weight and cost. The Japanese automobile manufacturers have been assembling cars in the country for over half a century yet the much needed deletion has not taken place. China has succeeded in developing its own brands of vehicles while we seriously lag behind mainly because of poor facilitation by the government. In the early part of this century, a local brand was introduced called ‘Revo’ which was manufactured by Adam Motors in Karachi. Five hundred cars were built but unfortunately due to a lack of official support and pressure from the assemblers the plant was shut down.

[Pakistan reports 5,196 coronavirus cases, 15 deaths in 24 hours](https://nation.com.pk/26-Jan-2022/pakistan-reports-5-196-coronavirus-cases-15-deaths-in-24-hours)

With imported fuel, the country produces very expensive energy and power which results in curricular debt as the public at large is unable to pay for it. Expensive foreign exchange is wasted on luxury items. Because of the Iran-Iraq war of the decade of the eighties, Iran incurred a foreign debt of about $20 billion. After the hostilities ceased, the country decided to get rid of this menace. Every dollar was saved to pay back the borrowed money. Ministers and senior officials travel on domestic airlines, stay on embassy premises with very little travel allowance. Within a few years the country was able to become debt free. Debtor nations are always seriously disadvantaged to compete with the debt free countries where the cost of capital and inputs are low. Borrowing has to be seriously contained for economy to stand on its own feet.

Both energy and the use of indigenous technologies has to be taken seriously to meet national needs first followed by exports to earn foreign exchange. Import substitution through local manufacturing can have a major impact to boost the trade imbalance. With the fast depleting gas reserves, a new energy system can be developed based on the massive Thar Coal reserves. Discovery of Shale Gas is also a viable option which should be vigorously pursued. While the security of the state is important, economic insecurity is lethal. Today, the country needs clear road maps both for energy security and the commercialisation of indigenous technologies. At the end of the day, a sound economic model counts which is based on know-how and resources. It is time to put our house in order.