Groping for an energy security policy, as power supply dwindles

By Anil Sardana

Energy powers the growth of a nation and has been universally recognised as one of the most important inputs for economic growth and GDP. To maintain this growth, it is imperative that energy is readily available and is affordable.The growth of an economy hinges on the availability of cost effective and environmentally benign energy sources, and the level of economic development has been observed to be reliant on the energy demand.

Sources of power must necessarily be reliable without being vulnerable to long or short term disruptions. Interruption of energy supplies can cause major financial losses and create havoc in economic centres, as well as potential damage to the health and well-being of the population.

India is well-endowed with both exhaustible and renewable energy resources. Coal, oil, and natural gas are the three primary commercial energy sources. Historically, coal has been the largest source of energy. However, India's primary energy mix has been changing over a period of time. But resource augmentation and growth in energy supply has not kept pace with increasing demand and, therefore, India continues to face serious energy shortages.

Until renewable energy sources in one form or more becomes capable of providing 365 days x 24 hours continuous predictive power, irrespective of input similar to conventional power plants running on coal, nuclear, hydro etc., grid parity has little intrinsic value and can at best address grid power requirement for the time of day when either wind or solar energy can deliver associated output.

Due to shortages and the inability of renewable energy resources to provide continuous power like oil and coal, there has been an increased reliance on imports to meet the energy demand and more imported sources will be needed in the years ahead.

The absence of new gas finds and declining production from Krishna-Godavari-D6

field is pushing the needs for enhanced gas imports. Petroleum ministry data suggests LNG imports in 2012-13 is expected to be at 69 million standard cubic metres per day, well over twice the quantity last year. From there on, the imports will increase over two and half times, to 184 mscmd, in 2016-17, with total gas availability estimated at 197 mscmd and 394 mscmd, respectively. This will increase the LNG share in five years from 37 per cent to 46 per cent.

Coal has been the mainstay of the power production in India and would continue to have a lion's share and thus, an important role to play in meeting the demand for a secure energy supply.

Changing price patterns

Historically, coal prices have been lower and more stable than oil and gas prices, and coal has also been easily available for power producers across the country. However, things are no longer the same.

According to the Ministry of Coal, the gap in demand and domestic supply of coal has increased from about 50 million tonnes (MT) in 2007-08 to 83 MT in 2010-11. The projected coal demand in the terminal year 2016-17 of the 12th Five-Year Plan is about 980 MT and the envisaged production to meet the projected demand is 795 MT leaving a gap of 185 MT.

While there are unexplored coal blocks that companies can apply for captive mining, the challenges are huge and can deter companies from applying for captive mining. There is a lack of assessment of India's natural resources – a number of areas remain unexplored and the mineral resources in these areas are yet to be assessed. A TERI policy brief on coal concludes that India may have coal reserves in plenty but in reality, the coal that can be extracted is only a small fraction of our total coal inventories.

Considering the burgeoning gap seen in domestic coal supplies, public and private sector entities have embarked upon imported coal as a means to bridge the deficit. Some Indian entities have taken upon themselves the task of purchasing, developing and operating coal mines in international geographies. While this is expected to secure coal supplies, it has thrown open associated challenges and exposure to non-familiar geographies. For example, the key international sources of coal supply to India are Indonesia and Australia. Indonesia poses significant political and legal risks in the form of changing regulatory framework for coal to be sold not below Government's declared prices, while the carbon tax in Australia of 30 per cent has made coal exports unviable.

The Government of India should therefore evolve an energy security policy, conveying use of portfolios, basket of fuels and must issue guidelines as to how regulators must ensure that at each state level they build the tariff using bulk sourcing of power based on prudent mix of portfolio of fuels comprising of both imported as well as domestic.

The pending Fuel Supply Agreements need to be resolved for long term coal linkages. For these, institutional mechanisms need to be strengthened to facilitate fast track clearances for coal mining projects through a single window inter-ministerial body. The government also needs to take measures to develop a conducive and enabling policy framework by introducing an independent coal regulator to oversee mine planning and development, adherence to investment plans and a production schedule to build a road map for commercial mining.

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