

## THAR COAL WAITING FOR EXPLOITATION

The total coal reserves are about 185 billion tonnes and are second only to the US reserves of 247 billion tonnes in Pakistan. These deposits are equivalent of 850 trillion cubic feet (TCF) of natural gas that are 30 times higher than the present Pakistani gas reserves of 20 TCF.

The contribution of coal to generate power is nominal, i.e. only 150 MW as compared to total power generation capacity of 19,000 MW. It is mainly used for firing brick kilns. Coal reserves can be used for power generation for about 200 years. Instead of using coal gas was being preferred for the maximum use while its reserves would last in 20 years due to increasing consumption. The growth of coal declined 18.5 percent during July-March 2009 – 2010.

The coal reserves of Thar are now attracting attention of the world to be exploited, which were lying unutilised for time immemorial. The infrastructural and development work in four blocks of Thar coalfield have already been awarded to foreign companies.

However, the latest development is that the government has been given the responsibility of developing the coal industry to Dr. Mubarakmand, a nuclear scientist and a member of the Planning Commission.

He has started work on the Underground Coal Gasification (UCG) project that would convert underground coal into gas, without bringing it above ground. Coal gas will produce electricity and meet the country's power needs at economical rates.

The test burn of the coal will be done in March and after this test burn 3 to 5 MW power would be produced that may be increased to 100 MW and later on to far higher quantity. He said Thar coal deposits would take another three to four more years to be put to use for producing power. However, it is expected the project being set up with a cost of Rs. 500 million in Block 5 will take only a year to complete.

To encourage investment in this sector, Dr. Sohail wanted the government should declare coal a national security and of national importance. He said only Thar coal could solve the energy crisis of the country.

He indicated only one percent of the deposits on which the test burn would be done could produce 10,000 MW of electricity for 30 years and 100 million barrels of diesel. This quantity could be raised to 50,000 MW in future.

Some experts are doubtful about the power production figures from this technology, inferior coal quality and the type of soil found on top of the coal seam. But the government officials claimed the quality of lignite coal found in Thar is the most suitable for underground gasification.

The electricity to be produced from the coal gas would cost about Rs. 4 per unit. Private companies from Australia, UAE, and the UK will begin development work in near future. A Pakistani firm Engro has also obtained concessions in a block and plans to set up a power plant.

Until sixties, coal was the single largest source of primary energy in Pakistan. But discoveries of oil and gas have resulted shifting energy source from coal to furnace oil and gas.

Coal is found in all the provinces of Pakistan but Sindh has major portion of the deposits, located at Lakhra, Sonda, Badin, Metting and Thar. The Thar deposits alone contain about 185 billion tonnes. The coalfield is divided in eight blocks.

The deposits in Tharparkar discovered in 1992, but after wasting about two decade time not a significant coal based power project has been set up in the country, except 450 MW power plant

in Lakhra. Lakhra Coal Development Company has 44 mines fully developed, each capable of producing 40 to 50 tonnes coal per day while 39 mines are under development. Most of this production is used in the power plant at Khanote and in brick kiln industry.

Both central and provincial governments have failed to show any progress. The example was a Chinese company engaged in exploring since 2002, was compelled to pack up and leave the country, due to non-cooperative attitude of Nepra, the official company of energy and power regulation.

Now the government is planning to increase share of coal in the energy mix from 5 percent by 2020.

The government has already got approved the PC-1 of the Integrated Gas Combined Cycle from ECNEC.

The Sindh government announced in March 2010 that it would start six mega projects to develop infrastructure at Thar coalfields so that the work on country's largest coal reserves could be started on fast track basis, but progress is very slow.

In many countries coal is being used for instance it is about 72 percent in China's power needs, 56 percent in India, in the US more than 50 percent of coal is being used for power generation. The share of coal in world for power generation is 38 percent. Pakistan can set up coal based power projects as its contribution to gas emissions is about one percent only.

About two thirds of the world coal deposits are being used to run electricity plants and the remaining one third for industrial purpose. Pakistan has yet to begin productive use of its coal deposits.

The Sindh has already finalised a comprehensive project that includes mining, power and infrastructure required for Thar coal development. This is a joint venture project for coal mining of 6.5 million tonnes per annum. It also includes a coal-fired power plant, of 1200 MW and construction of water carrier for the plant alongwith construction of effluent disposal system. The World Bank has invested record amount of money in 2009 in coal projects, which is being criticised.

Sindh Engro Coal Mining Company (SECMC) has been formed and it has completed a bankable feasibility by engaging world renowned companies, including RWE of Germany and Sinocoal of China etc. The first mine and power plant is expected to be commissioned by 2015-16. The estimated cost for the project is \$ 3.6 billion ; three Chinese companies have shown interest in the project. The Chinese interest and the already available feasibility, made by the best Chinese firms, may expedite the progress of the project on fast track basis.

Balochistan and other provinces have also failed to depute their expertise ready for exploitation of their natural resources like oil and gas and minerals, especially copper and gold. In 2009 the federal government decided to disband Thar Coal Company, which was not acceptable to the Sindh government and was thus hindering the progress of the project.

Sindh government has spent about to Rs. 50 million. The coal deposits which are estimated to be about 175 billion ton in Tharparkar that can be a reliable source of energy for the entire country. Six years have been wasted in trying to attract foreign investors to finance \$ 1.5 billion in mining coal and producing electricity from Thar coal without a breakthrough, the federal government had decided to form a \$ 500 million Thar Coal Mining Company (TCMC) in public sector in April 2006 by unbundling the whole project into mining and power generation projects. China was offered in November 2006 to become an equity partner in the TCMC, but it did not show interest later. The SECMC and the Pakistan Electric Power Company (PEPCO) signed a memorandum of understanding for generation of electricity through coal reserves in Thar. Under the MoU Pepco will buy coal to produce 1,200 MW electricity. The SECMC will generate another 1,200 MW.

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