

Towards the quantum leap: Thar coal

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RECORDER REPORT



The Ministry of Finance has agreed to provide Rs 900 million to Thar Coal Gasification Project to generate a modest 100MW of power based on coal gas on an experimental basis. In April 2009, Dr Samar Mubarakmund proposed a two-step solution. One was to geologically verify the gasification process proposed by him. And, once it is ascertained beyond any shadow of doubt that coal gas can be successfully obtained - then import the machinery to compress the coal-based gas and utilise it for power generation.

The estimated cost for the first phase was Rs 494.5 million while the amount allocated for the machinery component was Rs 490.48 million.

Conventional coal mining involves either digging deep into the earth, creating a mineshaft for people and equipment to go down into the earth crust and bring coal to the surface. Excavation of coal from earth's layer under the clay is the second principal job. This process is known as open earth mining. Both require efficient transportation of the coal to a point where water is adequately and abundantly available. A combination of burning coal and water, will therefore, produce steam for steam engines to produce electricity.

Most important parameters for coal-based gas prospecting are the presence of a large volume of coal with high gas content and sufficient permeability within the seam to allow gas production. A major problem at Thar, however, is said to be a high moisture content, requiring dewatering and depressurising the seam. Therefore, an infrastructure involving road connectivity and a major water line near the coal mine needs to be created by the government. This requires both money and at least a five-year time line before electricity can be generated through coal.

Dr Mubarakmund wants to replicate a coal mining process he claims to be greatly successful in China and Uzbekistan. It involves a 13-inch boring into the earth. Placing an eight-inch perforated pipe in the hole and then subsequently pouring lignite coal as fuel to be burnt into the perforated pipe. Then provide a burning additive to light lignite coal. The burning lignite is supposed to burn into the layer of coal through the perforations which will ultimately produce coal-based gas. About 50 holes have reportedly been bored and piping, etc, work has been completed. Now funding is required for equipment - compressors, controllers, etc - to collect the coal gas to provide steam to run a 50MW electricity generator. The first run experiment has been scheduled for September this year. If this is successful, it would be considered the cheapest, cleanest and quickest way to produce coal gas electricity generation. It is a gamble worth taking. The pilot project cost is under a billion rupees. We wish the scientist and his team good luck and Godspeed.

It is also hoped that the chances of replicating the same process by other investors cannot be ruled out. But this pilot project must not distract us from the real issue: the energy crunch, which needs to be tackled in short, medium and long-term.

In short-term, we need to get the pricing of our domestically produced natural gas right. We still need to priorities natural gas consumption. Power must get the first priority followed by manufacturing. The use of CNG as fuel in private vehicles must stop forthwith. Domestically produced CNG's and LPG's prices need to be raised, through a gas development levy. These are brought closer to the import price of these fuels. Ports need to be properly equipped to handle CNG, LPG and coal cargoes. Historically, Pakistan has neglected coal because the nature has endowed it with a cleaner and cheaper fuel in the shape of natural gas. Domestic production compared to demand is falling and needs to be supplemented. The situation, therefore, underscores the need for a comprehensive energy policy for the next 20 years. Once an energy policy with clarity and sincerity of purpose is in place it would require a single entity to implement it in a co-ordinated manner. An autonomous energy board comprising able professionals needs to be in place under a single consolidated authority - the Ministry of Energy. Second, the Council of Common Interests (CCI) must resolve the issue of execution, financial needs and revenue-sharing between the centre and the four provinces. The Constitution provides a framework, which requires cooperation not confrontation. The Islamabad-Karachi impasse on Thar Coal development must come to an end. The Sindh Government, in spite of taking ownership of mineral and oil resources in the province following the passage of the 18th Amendment, still wants funds for Thar Coal project from the Centre's Public Sector Development Programme. The Centre with 43 percent of the revenue pie, as per agreement reached in the 7th National Finance Commission Award, claims that it does not have the funds to persist with the development of Thar Coal project any longer; it wants Sindh to use a portion of its Rs 39 billion earned from Gas Development levy to fund the infrastructure for Thar area. Let there be a public-private partnership - after all investors are being granted a tax holiday and a guaranteed 20 percent rate of return. The governmental investment should be equally divided between the Centre and the province. However, a holding company manned by professionals possessing the required international coal and mining experience would need to be attracted for an efficient and a visionary implementation. Mining leases to private entrepreneurs also need to be issued. Let us make a quantum leap towards meeting Pakistan's energy needs. The Earth nurtures us and gives us what we need to live, like a mother does for her child. Pakistan's energy future lies in the desert district of Sindh.