

Comment: A solution for the energy crisis —Bilal Naqeeb

In India, waste-to-energy projects have been successfully implemented since 1995. Most of the initiatives are designed to harvest energy from the waste produced by industries, e.g. the waste of palm oil industries in Andhra Pradesh and the poultry droppings of one million birds of nearby poultry farms in Tamil Nadu

The worst ever energy crisis in the history of Pakistan has not been overcome yet, even when two years have passed since the present government took charge in February 2008. The minister for water and power stipulated several deadlines to overcome the crisis on different forums, but no effort has brought us fruitful results.

The situation requires not only simultaneous short-term and long-term planning but also out-of-the-box solutions that are innovative, cost-effective and adaptable, and have the potential to tap private sector investment.

The energy crisis is not unmanageable but requires a high level of commitment from the government machinery to address it on priority basis. The country has a total installed power generating capacity of 19,450 megawatts (MW) from different sources. Presently, the share of energy consumption in the country is 23 percent residential, 34 percent industrial, 34 percent transportation, 3.0 percent commercial, 3.0 percent agriculture and 3.0 percent government offices. It is interesting to note that of the total installed capacity the public sector contributes 70 percent while the private sector's share is estimated at 30 percent.

In order to cater to the needs of the domestic and industrial sector, a shortfall of 8,000 MW is estimated, to overcome which is targeted by FY2010. There are a number of alternate energy resources that are being considered by the planners. These include: wind, solar, solar thermal, biomass (waste-to-energy), bio fuels, micro hydel, geo thermal and geo magmatic.

In Pakistan, quite a few organisations in the NGO sector have the ability to provide technical solutions and backing support for service delivery development programmes. Green Circle Organisation (GCO) is one of them, which has been developing and implementing multi-dimensional programmes in the sector of agriculture and production of energy. According to the president of this organisation, the most suitable alternate option to produce low cost energy in the private sector is "waste-to-energy". Such types of programmes can be developed and implemented at the district level and can be managed locally.

Like in China, the government should motivate and support city governments for the implementation of projects for renewable biomass energy. It is estimated that the top 10 cities of Pakistan produce 50,000 tonnes waste, which can be used to produce 6,000 MW energy. In Faisalabad alone, 714,000 households produce 714 tonnes garbage (1 kg/household at minimum), which can be utilised for the production of 86 MW. It does not include the waste produced by factories and textile industries which is more than 50 percent of the total waste and has high heating value.

For the purpose of management, it a decision is required on the size or models to serve communities and businesses, e.g. villages, union councils, industries, shopping malls, tehsils/towns and districts, etc. Considering the availability of resources, local needs and potential of consumers, different patterns of infrastructure can be developed and implemented.

In India, these kinds of projects have been successfully implemented since 1995 with the assistance of international funding agencies. Most of the initiatives are designed and implemented to harvest energy from the waste produced by industries, e.g. the waste of palm oil industries in Andhra Pradesh and the poultry droppings of one million birds of nearby poultry farms in Tamil Nadu. In 2008, the federal government decided to set up 31 waste-to-energy additional power projects in eight states. During 2004-05, projects based on industrial wastes were entitled to subsidy for reducing the rate of interest to 4.0 percent for special category states and 6.0 percent for other states on the loans availed by promoters through financial institutions. The financial support for municipal solid waste-based projects was available during 2002-03 (capital subsidy of 50 percent of the cost of projects limited to Rs 3.0 crore per MW for demonstration projects and interest subsidy for commercial projects) and was under review for rationalisation.

The government should plan to subsidise the installation and production of energy through new sources. At present, WAPDA purchases electricity at different prices, i.e. furnace oil-based production at Rs 12.5 per unit, Sui gas-based Rs 6.5 per unit and the lowest is hydel-based at Rs 3.5 per unit. The cost of waste-to-energy is anticipated to be on the lower side in the long run after developing infrastructure and human resource capacities.

In order to sensitise and educate different stakeholders, academia and the media should organise debates at different forums, which will create acceptance for such types of investments in public, corporate and not-for-profit sectors. In addition, academia should emphasise on such technologies while designing courses so that sufficient human resources may be produced in the years to come.

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