

Striving for Energy Self-sufficiency

MORE than three-quarters of the Bangladeshi population, nearly one hundred million, live in the rural areas with agriculture as the main occupation. Cooking and lighting are the major energy end-uses in the villages. Most of the energy demands are met by bio-mass fuels — firewood, animal dung and crop residues or any other non-commercial fuels which they can lay their hands on. Commercial fuels (fossil fuel) have not penetrated the majority of rural areas due to absence of efficient energy markets, limited natural gas networks etc., a consequence of low purchasing power and poor infrastructure development.

Energy supply in the country, particularly in the villages, is in serious shortage. Rural electrification through grid networks, despite reasonably rapid expansion since 1978 in terms of villages covered, with the creation of a separate institution called Rural Electrification Board (REB), has not yet been able to provide access to the majority of the rural households. Consequently, even rural electrification has not made any significant contribution to rural development. Continued dependence on biomass fuels as a means to achieve sustainable development in the rural set-up has manifested in serious environmental problems such as natural resources degradation affecting the quality of life, especially that of women, who are collectors, processors and users of bio-mass fuels. Environmental impacts of fossil fuels, in the rural areas, restricted to kerosene and diesel use, is very insignificant. However, the increases expected in the energy requirements over the next few decades thus warrant a search for environmentally sound and economically efficient alternatives. Here comes the issue of energy self-sufficiency.

Throughout human civilization, energy has been one of the prime movers of economic development. Before fossil fuels — coal, oil and gas — came to dominate the energy scenario in the last two centuries, bio-mass, a renewable resource, was known to be most prominent fuel source the world over. The environmental problems related to fossil fuels, however, are still concentrated in the industrialized economies and pertain to energy-intensive lifestyles.

The developing countries like Bangladesh face energy crunch of a different nature — most of the energy resources are exploited unsustainably. Inefficiency in using the resources also contributes to over-exploitation of natural resources. At the local level, erosion in the resource base leads to a deterioration in quality of life. Thus energy self-sufficiency means different things in different societies.

Be that as it may, achieving total national energy self-sufficiency in Bangladesh, like nirvana, is a state greatly to be desired, but the path to it involves an equally arduous, disciplined effort. Those who know say, any possibility of getting there lies somewhere well into the next century. The rigid definition of the term, as it is understood now, implies zero energy imports. This cannot be a real situation in Bangladesh. Rather, I believe, since we are now able to reckon the energy issues and see what the problems are, our definition of self-sufficiency may be suitably worded to give a meaningful expression of our own thought process based on actual energy resources position in the country. Although adequate supplies of competitively priced energy is usually a pre-requisite for meeting the country's development objectives, purchasing capability of a common citizen is as important. For example, if the sales price of natural gas, the only commercial energy source in the country, is increased abnormally high commensurate with the international (market) price for local consumption, the likely scenario would be less and less domestic development compared to the desired level. Moreover, gas price equalization concept for all consumers also might give negative signals to the expected socio-economic development of the country.

From a practical view point, what we are shooting for is far too less. The coming five to seven years will be our greatest period of stress, before our drive toward self-sufficiency begins to reduce our import requirements. It will also be our greatest testing period as to whether we are going to continue to live from our summer electricity shortage to the next one.

Still underlying all the economic uncertainties of the international oil scene are the dangerous geopolitical hazards which actually exist in the real energy world. The use of the oil dagger as an economic weapon has been temporarily sheathed in the recent times because of glut in oil supply geopolitics in the international oil market. Perhaps an attempt would be made again in the near future by the oil producers or the oil companies to stab even a small consumer like Bangladesh. Thus, a non-oil producing consuming country will remain under constant threat, which may seem almost unsurmountable.

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be optimistic about the solution of our energy problem particularly when lack of technology, lack of skilled manpower and shortage of fund are not allowing us to move forward. In one word, achieving near self-sufficiency in energy in Bangladesh depends largely on increased new investments in the gas industry during the critical transition period when alternative energy sources are being developed to come into play hopefully by 2005.

However, it is desirable that every energy pot must stand on its own legs in accommodating its development for achieving the nation's environmental goals as well. In the energy domain the indigenous resources (gas, coal) and imported oil industries provide commercial supplies. Admittedly, we have already begun a new environment conscious society for our urban middle class and elite, which will change the lives of say fifteen per cent of the population for the better. What about the rest eighty five per cent?

The sooner we realize the latter concern, the sooner we will stop stepping on our own feet. Some

say that at present we are creating more energy problems rather than solving the one we have. Perhaps we are so psychologically geared to the idea of

doing things slowly that it hardly seems possible that we can't have crash programme to get us out of our predicament. It is also alleged that we do meddle ourselves far too often with kindergarten exercises compared to the technological, bureaucratic, financial and political obstacles which must be overcome. People say that it is next to impossible to draw up a specific timetable for energy, how much and what kind we will be using just when because too many unpredictable factors are involved concerning decisions we haven't made yet. That's why even all comprehensive Energy Studies conducted since 1974 and or individual gas or power or non-conventional energy studies carried out over the last 25 years usually present multiple case histories. The number game now is so complex that it's a good thing we have also started using computers, or we'd really be whistling in the dark. Although reasonably generously endowed with natural gas, Bangladesh does not generate enough electricity even to meet current demand. Mid term requirements of commercial energy can be met from fossil fuels but over the longer term for significant environmental reasons, it would be vital to explore the commercial use of renewable energy sources.

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