5

MAJOR ISSUES AND OPTIONS

Major Issues in the Energy Sector

The assessment of the energy sector in the preceding sections of this paper has underlined some important issues which demand careful consideration.

Nepal's energy sector is on the road to long-term unsustainability. This situation arises because of the overuse of certain renewable resources while other renewable resources remain unused. Plans are supposedly being prepared, and in some cases have been partially implemented, to rectify the situation. Even accepting that these plans can bring about desired changes in the future, what can be done in the interim until the expected changes begin to materialise?

The supply gap in the provision of traditional energy is leading to a diversion of organic plant nutrients into domestic energy use. This can only continue at the cost of agricultural productivity. How can this conflict be resolved?

The exploitation of water resources for energy can be conceptualised in terms of meso-or micro projects and a range in between. Each has positive and negative aspects. What should be the guiding considerations in decisions concerning investment in hydropower development?

Energy in rural Nepal is basically a consumption item and does not form a part of the rural economy. How can the existing situation be changed to make energy a prime mover in the rural economy?

Energy-led demands on the rural environment may continue to put further stress on the already fragile, natural ecosystem. How can such stress be reduced?

Government policy responses seem primarily geared towards the monetised component of the energy sector. This is inadequate to meet the overall challenge. This inadequacy is due to the absence of an overall strategy on energy development. How can this gap be closed?

Institutional arrangements in the energy sector still fail to promote an integrated approach to energy development. The sector therefore shows the syndrome of the 'tragedy of the commons'; especially in respect of the cost to society in consuming various energy forms. How can this problem be adequately addressed?

Energy conservation efforts are grossly inadequate. Programme implementation does not provide scope for optimism. What can be done to remedy the situation?

Alternative energy technologies are largely ornamental in an overall policy context. They, however, exhibit potential for far-reaching changes. How can this potential be realised?

Continued external assistance will be required for energy development programmes. How can they become a part of the overall national development policy?

Options in the Energy Sector

The options for sustainable development emerge from an explicit recognition of the fact that Nepal's energy problems do not arise out of an excessive reliance on non-renewable energy sources. They rather arise because one form of renewable energy is being consumed at an unsustainable rate while others remain virtually unused. Thus, the energy transition for sustainable development does not entail a shift away from fossil fuel to other forms; as is commonly observed in most other countries.

The feature of energy transition within renewable forms should be such that it not only generates growth in the economy but also does it in a manner that integrates sectors by way of stronger linkages. In other words, the energy transition should be a contributing factor to the sustainable development of the economy. The importance of this linkage is also underlined by Nepal's painful experiences caused by external shocks. The vulnerability of the economy to such external shocks underscores the need to follow strategies that minimise the chances of the recurrence of such situations.

There is little doubt that the long-term path to sustainability lies in exploiting the abundant hydropower for energy. Clean energy is a major goal; hydroelectricity can provide it. It can also become a major export commodity. On the domestic front, an electricity-based transport system could go a long way to reducing dependence on fossil fuel and thus contribute to the conservation of non-renewable resources.

The basic options available rest on a choice between following a mega-project approach in water resource development or a decentralised approach with emphasis on appropriate plant sizes. One fundamental question here is how investment in either of these will lead to (a) wider participation of the population in sharing the benefits of the investment, (b) a stimulus to agricultural and agro-processing industries, (c) an overall impetus to rural industrialisation, and (d) minimisation of negative environmental consequences.

The next set of action relates to the use of the forests to meet energy needs. The forests will continue to be an important energy source for the majority of Nepalese. Therefore, in addition to using a pricing policy to affect consumer behaviour (at least in places where alternative energy sources are available; for example, in the major urban centres), there should also be efforts towards conservation and enhanced efficiency in use. Increased prices affect the weaker sector of the community disproportionately. Therefore, conservation efforts, such as distribution of ICS, must place strong emphasis on the poor. Similarly, management of the forests for better productivity should be an equally important consideration. The option here is whether to attempt to reduce indiscriminate use through a central management system or to attempt the same through decentralised management and user group participation. Of course, the latter is easier said than done, but the ability of the actual users to manage community resources has been well and truly demonstrated. Also user group participation is a process that becomes stronger with time; a condition compatible to sustainability.

The long-term option in the forestry sector is certainly reforestation on an enhanced scale. Here too, the question of central vs. local capability to effectively implement such programmes by involving the actual users, especially women, must be given proper consideration.

Energy conservation programmes are important and should be seen as programmes that compete, with the funds being provided for capacity generation and expansion. Conservation efforts should cover all energy forms and not only fuelwood. Electricity conservation could be achieved through the promotion of better end use devices. Encouragement to domestic industries to produce such devices may be contemplated.

Conservation education aimed at providing information and hints for efficient use of end use devices must be undertaken. Such a conservation education programme should have actual users as its focus. Transport users, housewives, agriculturalists, and industrialists are some of the target groups.

The option of using a pricing tool to regulate consumption behaviour should always be exercised. However, the effect of such policies is seen to fall more often on the weaker section of the society. The pricing tool can always be effective in setting more reasonable, relative prices for various energy forms in an environment, when energy is a traded commodity. It is necessary to look at fuelwood pricing policies to make them competitive with kerosene prices, in order to reduce the pressure of accelerated deforestation arising out of the increased demand for fuelwood in the future. There is a wide divergence between the market and social cost in the fuelwood sector.

ADB/N's experience in the promotion of micro-hydro technology deserves a closer look for replicability on a wider scale. The agricultural development bank, private sector producers, and technology consumers are seen to have worked out an arrangement beneficial to all. Besides, this technology has demonstrated that energy as an intermediate input and as a final consumption item can be promoted simultaneously. Wider application of this approach in hill agriculture, especially in lifting water for irrigation, could open up unlimited possibilities.

Biogas, in spite of its enormous potential, is not being widely adopted in Nepal. The reasons for this lie within technical, economic, and social variables. What are they? An in depth study to identify the exact reasons and possible remedial actions should be undertaken immediately. This form of energy should not go untapped. At the same time, better use of agricultural residue and dung could be facilitated as the slurry from the gas pits could go back to the fields as manure.

Wind energy for electrification and water pumping in a few mountain areas might be a feasible proposition as shown by the Jomosom experience. Additional efforts to promote wind energy are, therefore, required.

Effective use of location-specific resources can only be possible under conditions of decentralised planning and management of resources. Rural energy planning and management must also be seen in this light. This is possible when an overall strategy for energy development is formulated, and rural energy made a part of such a strategy. This has not been the case and rural energy is not, for all senses and purposes, part of a well thought out strategy.

The role of women in the energy sector is very prominent. Their role is not only important in the domestic sector (cooking and lighting) but also in the agricultural sector. Therefore, women should be fully involved in extension education, training, and R and D. Similarly, women, in recognition of their productive role, must be directly approached in the context of the planning and implementation of projects. For example, for projects such as social forestry it should be made compulsory to include women.

The above are the main issues and options in the energy sector. Some of the options are short-term in nature, e.g., the pricing of energy, compared to others that are essentially long-term.

Sustainable development should follow all those options leading to a transition from inefficient use to efficient use, from non-renewable energy to renewable energy, and from current consumption to investments for the future. After all, if one plans for the future then such planning must begin now and actions must follow immediately.

Unfortunately, quite often in the past, programmes have been proposed and discussed, commitments made, funding assured, institutions identified, and a plan of action formulated within the confines of a seminar hall; only to be ignored or discarded when actual programming begins in the relevant ministries. It would help if everyone reflected upon the number of such seminars one has attended and in which recommendations have been made that were hardly or ever translated into concrete action.