

- e) Commercial and industrial energy efficiency schemes.
- 3) Those with potential for impact in isolated situations but demanding pilot projects, demonstrations, research work and social studies for their implementation. These projects could nonetheless start in pilot form in the immediate future:
- a) Biomass energy (small scale conversion systems);
 - b) Wind energy systems;
 - c) Solar energy for use as direct heat;
 - d) Solar-electric power systems;
 - e) Village scale energy efficiency schemes; and
 - f) Tidal power systems (very few viable sites).

All the above techniques will probably be able to make significant contributions to the energy pool in the future years as the techniques are better developed and larger scale installations become technically and economically feasible. In the cases of smaller scale application, the social and human benefit may often be substantial even if its impact on hydrocarbon demand is negligible.

3.4 Energy Planning in Developing Countries

While much useful energy development has been able to proceed in the absence of integrated national energy planning, such planning is increasingly recognized as an integral part of any national economic, political, industrial and social development. In determining the nature of energy needs of developing countries, however, several issues need to be addressed.

3.4.1 Supply and Demand Assessment

Given a proper survey of a country's energy resources and a study of the environmental and social benefits and hazards involved in developing them a comparative energy analysis can commence. Such a comprehensive energy analysis is a prerequisite to establishing a national energy plan. This analysis would, ideally, include an assessment of both current and projected demand and available energy resources