SUMMARY AND CONCLUSIONS

More than 90 per cent of the rural population in Bhutan depend on fuelwood as the major source of energy. This case study indicates that the existing forests can supply the annual requirements of fuelwood to the rural population in nine out of ten blocks under study. However, future projections of the fuelwood demand and supply indicate that five out of ten blocks will have a fuelwood deficit in the year 2012 if the fuelwood supply remains the same and the fuelwood demand increases with an increase in population. In the alpine areas of the district, forests are far off from villages and this makes it difficult for villagers to collect fuelwood. The best alternative for solving the energy problem in these areas would be to convert the wood into charcoal and distribute it among the villagers. Efficient use of existing fuelwood resources, improvement of degraded forests, promotion of agroforestry, and promotion of fuel saving devices are some of the measures suggested for improving the fuelwood supply in Thimpu.

Most of the Thimpu Valley is connected to the grid system which receives power from three hydropower projects. Electric power is mostly used for lighting. Since electricity is going to be the cheapest source of energy in the future, its use on a wider scale will depend upon the availability of electric appliances

at affordable prices in the rural areas. In inaccessible areas, where grid extension would not be feasible, micro-hydel plants may be an appropriate alternative. Solar photovoltaic systems, biogas plants, and windmills are other alternatives to grid extension which need further research and development.

Although the Bhutanese Government is concerned about improving the rural energy supply, no systematic rural energy planning has been pursued for a variety of reasons. The present system of government organisation, in which a number of government agencies are involved in providing various forms of energy to the rural population, is not conducive to promoting a comprehensive rural energy plan.