Energy is the most basic resource in the existence of humans; without it, all else is impossible on earth. From the time immemorial, it has been in use in various forms. Although long in use, its necessity to human existence has not been realised as well as it has been in the 20th century. The prospect for 21st century is that we should quickly find alternatives, and at inexpensive costs.

Until the energy crisis of the early 1970s, the energy researchers have had a normal, slow course of progress. With the crisis, everything changed and the energy research has now come into itself. Notwithstanding the interests, there have still been limited focus on one or two sectors of the economy. There is now a change, whereby all sectors of economic importance are being studied as the thrust areas, the world over. The present study is one such, all encompassing in its breadth of coverage. This is a thorough, sectorwise energy consumption study, taking the Service Villages of the Gandhigram Rural Institute (GRI), Tamil Nadu as case in point.

The major objectives of the study are: (i) to examine and analyse the existing patterns of energy consumption in the six economic sectors, namely, household, agriculture, industry, transport, commerce and services sectors of the economy through an in-depth and sample based energy use survey, (ii) to identify the major determinants of energy consumption and estimate the energy use variations in the six sectors of the rural economy, from an analysis of the survey data collected from six GRI Service Villages, and (iii) to formulate an integrated energy management system, including the scope for energy substitutes in different sectors of the rural economy and proposing a 'socially acceptable and environmentally sound' energy policy for the rural areas.
In order to fulfil these objectives, primary data have been collected using well-structured and pre-tested interview schedules and secondary information has been gleaned, collated and synthesised from other publications, including periodicals, journals, books and reports and official documents. In all 534 respondents have been contacted in the select six villages in order to assess their energy consumption patterns, energy determinants and variants, socio-economic milieu and current energy potentials which are very relevant to the present study. The collected data have been presented in two-way tables using intercorrelational (Pearson) analysis. The study is confined to only Gandhigram Service Villages and therefore the findings and conclusions are also limited to the study. But what is more important is it has been helpful in developing an integrated energy management system, with implications for energy policy.

The thesis has been organised in seven chapters. The first chapter provides a brief introduction, stating the problem of analysis, the objectives, the methodology, the scope and limitations. The second chapter speaks of the rural energy profiles and the development programmes in India. The review and appraisal of literature appears in the third chapter. The fourth chapter gives the background to the study area and the socio-economic milieus therein. The details of analysis on energy consumption across the sectors in the six Service Villages are discussed in the fifth chapter. The sixth chapter presents the major findings and the implications through a tentative integrated energy system. The seventh chapter concludes with a summary and the conclusions of the study, stressing the thrust areas for future research.