



MOUNTAIN INFRASTRUCTURE AND TECHNOLOGY

Discussion Paper Series

AN ASSESSMENT OF THE ENERGY SECTOR IN NEPAL
Implication for the Planning and Management of Rural Energy

Suresh Sharma, Mohan Shakya
Lila Bhattarai, Sunil Rimal

MIT Series No. 9

1991

International Centre for Integrated Mountain Development

AN ASSESSMENT OF THE ENERGY SECTOR IN NEPAL
Implications for the Planning and Management of Rural Energy

MIT Series No. 9

Suresh Sharma is a staff member of ICIMOD and
Mohan Shakya, Lila Bhattarai, and Sunil Rimal are associated with WECS.

June, 1991

International Centre for Integrated Mountain Development (ICIMOD)
Kathmandu, Nepal

PREFACE

This paper was prepared for, and presented at, the Seminar on 'Rural Energy and Related Technologies' held in Kathmandu from 26 to 28 March, 1991, in collaboration with the Agricultural Development Bank of Nepal and the Water and Energy Commission Secretariate of His Majesty's Government of Nepal.

This paper assesses the energy sector in Nepal in terms of the existing and projected demand and supply of different energy forms and the use of indigenous energy resources, policies, and programmes in the energy sector, and highlights major issues and options for promoting a sustainable development in future.

ENERGY DEMAND PATTERNS
Sectoral End Uses and Proje
Domestic Sector
Other Sectoral Demands

Production P
Demand of
and Energy
approach to

© 1992

In the Year

CONTENTS

	Page
INTRODUCTION	1
ENERGY DEMAND PATTERN AND END USES	1
Overview	3
Energy Demand Patterns: Current and Projected Trends	4
Sectoral End Uses and Projections	9
Domestic Sector	9
Other Sectoral Demands	12
NEPAL'S ENERGY RESOURCE BASE AND ITS USE	13
Indigenous Energy Resources	13
Commercial Energy Imports	17
Major Issues for Consideration	20
STRATEGY, POLICIES, AND PROGRAMMES IN THE ENERGY SECTOR	21
Energy Development Strategy and Policies	21
Energy Pricing Policy	23
Energy Conservation Policy	25
Biogas Development Programme	26
Solar and Wind Power Development Programmes	26
Integrated Approach to Energy Planning and Management	26
MAJOR ISSUES AND OPTIONS	33
Major Issues in the Energy Sector	33
Options in the Energy Sector	34
REFERENCES	37
ANNEXES	39

LIST OF TABLES, CHARTS, AND FIGURES

Tables

1:	Sectoral Energy Demands 1980-81 and 1988-89.	5
2:	Sectoral Energy Demand Projections	7
3:	Total Energy Demand Projected by Source of Energy	7
4:	Commercial Use of Energy in the Domestic Sector By End-Use	11
5:	Distribution of Commercial Energy Demand in the Domestic Sector by Fuel Type	12
6:	Theoretical Indigenous Energy Resources	14
7:	Percentage Distribution of Investment Planned for Different Activity in the Plan Periods	22

Charts

1:	Domestic Sector Energy Demand Projection	8
2:	Domestic Sector End-Use Energy Demand	10

Figures

1.	Major Hydro Power Plants	16
2.	NEA System Map of Transmission Lines & Points of Power Export/Import	16
3.	NEA Operated Remote Small Hydro Power Units, Operational & Under Construction	18
4.	Alternate Energy Plants	18
5.	Ecological Circulation of Energy in the Village	31