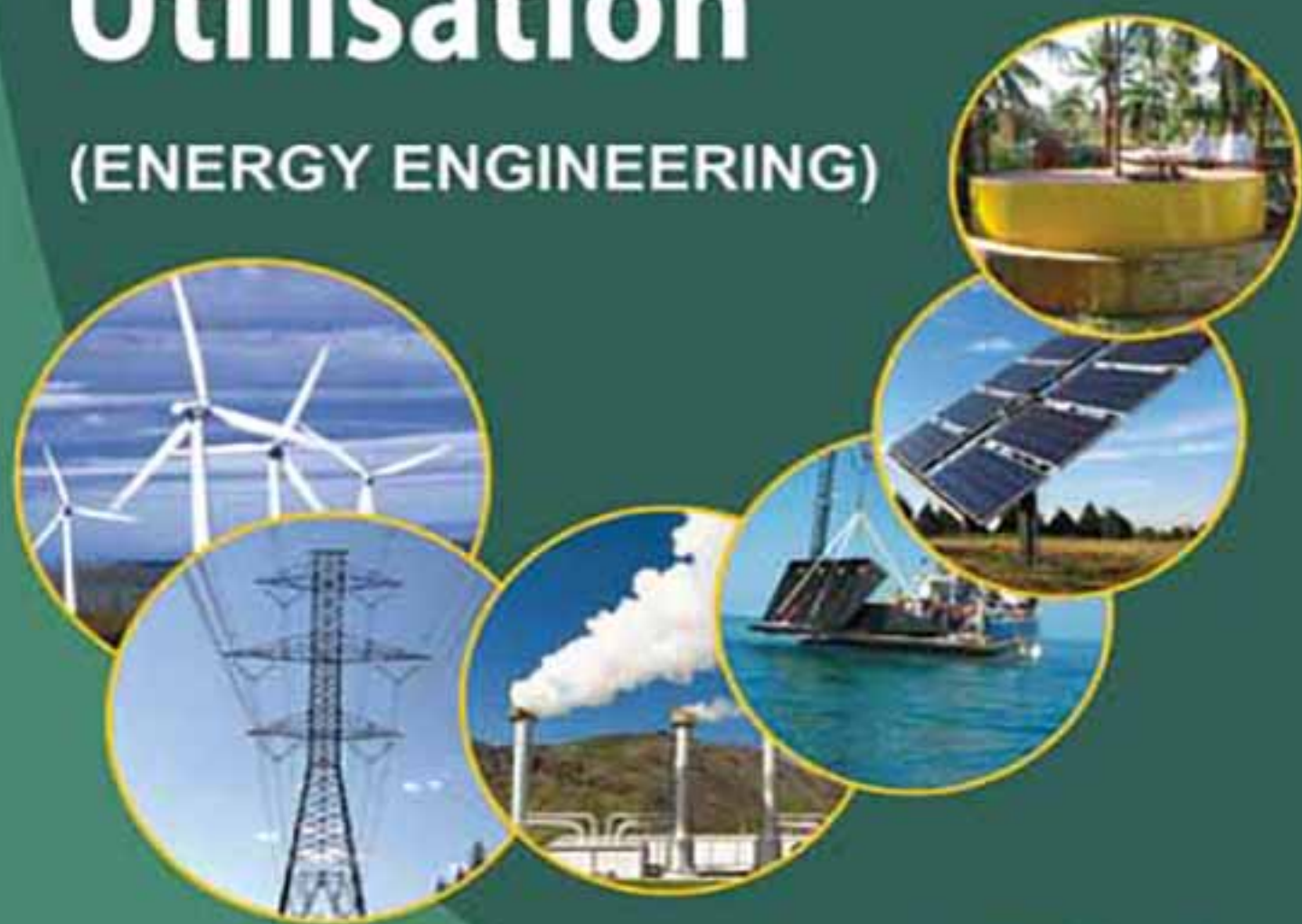


**Revised Edition**

# **Non-Conventional Energy Sources and Utilisation**

**(ENERGY ENGINEERING)**



**Er. R.K. RAJPUT**

**S. CHAND**

# Non-Conventional Energy Sources and Utilisation (Energy Engineering)

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For Students of B.E. / B. Tech, also useful for  
Competitive Examinations

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## PREFACE TO THE SECOND EDITION

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I take the pleasure in presenting the Second Edition of this book. The warm reception which the previous edition and reprints have received is a matter of much satisfaction to me.

In this edition, the book has been thoroughly revised and a new Section on “**SHORT ANSWER QUESTIONS**” has been added to make the book still more useful to the students.

I am greatly indebted to the management and the editorial team of S. Chand & Company Pvt. Ltd. for all help and support in publication of this edition.

The constructive suggestions for improvement of the book are most welcome.

**Er. R.K. RAJPUT**  
(Author)

## PREFACE TO THE FIRST EDITION

---

The primary purpose of writing this book is to make available to the student community a book which deals *exhaustively* and *systematically* various topics on “**Non-conventional, Renewable and Conventional Energy sources and systems.**” The subject matter has been prepared in lucid, direct and easily understandable style, with simple diagrams and worked out examples wherever necessary.

The book consists of **16 chapters**, namely: **1. Introduction to energy sources; 2. Principles of solar radiation; 3. Solar energy collectors; 4. Solar energy storage and applications; 5. Wind energy; 6. Bioenergy (Energy from biomass); 7. Geothermal energy; 8. Ocean energy; 9. Direct energy conversion; 10. Hydrogen energy; 11. Nuclear power plant; 12. Steam thermal power plants; 13. Diesel engine power plant; 14. Gas turbine power plants; 15. Hydro-electric power plants; 16. Environmental aspects of energy generation and pollution control.**

At the end of each chapter *Highlights, Theoretical Questions, Unsolved examples* (wherever necessary) have been added to make this treatise a *complete comprehensive book on the subject*.

This book will prove to be of immense use to the students preparing for Engineering undergraduate and competitive Examinations.

The author's thanks are due to his wife Ramesh Rajput, without whose cooperation and encouragement, this book would have never materialised.

In the end, the author wishes to express his sincere thanks to Sh. Navin Joshi (Executive Vice President), S. Chand and Company Pvt. Ltd. and Editorial Staff for their unstinted support for bringing out this book in such a good shape and in a short span of time.

Although every care has been taken to make the book free of error, yet the author shall be obliged if errors present are brought to his notice. Any constructive criticism/suggestions will be always most welcome.

**Er. R.K. Rajput**  
(Author)

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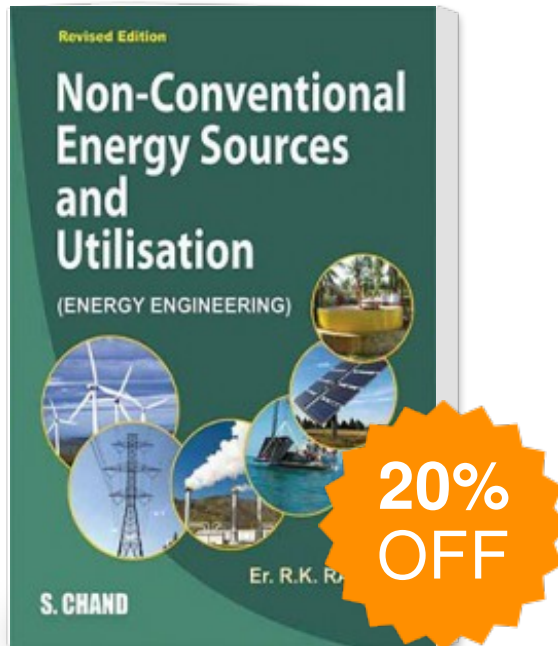
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