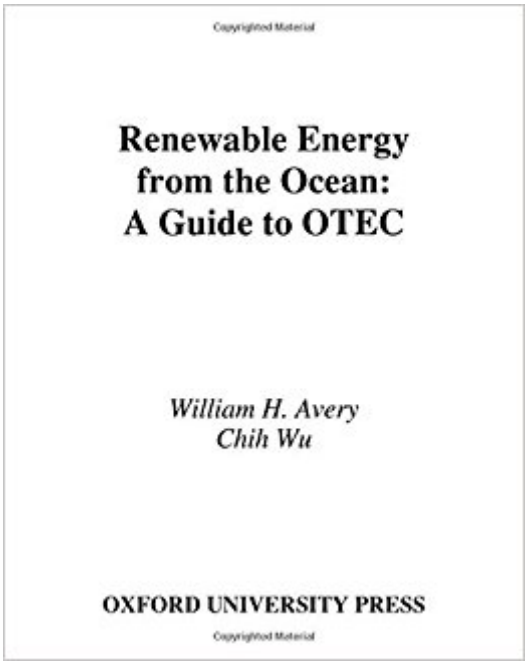
Renewable Energy From The Ocean: A Guide To OTEC (Johns Hopkins University Applied Physics Laboratories Series In Science And Engineering)



Synopsis

Scientists and engineers around the world are striving to develop new sources of energy. One source, ocean thermal energy conversion, has virtually unlimited potential. It is based on techniques that exploit heat produced by solar energy that may, in turn, be used to produce fuel and electricity. This book reviews the status and background of this promising technology. William H. Avery is the leading expert in this field, and his co-author Chih Wu is an authority on heat engine performance. Together they describe the workings of an OTEC power plant and how such a system might be implemented as part of a futuristic national energy strategy. The book is the only detailed presentation of basic OTEC technology, its testing and improvement. It is based on extensive development initiatives undertaken internationally during the period from 1974 through 1985. The book offers a thorough assessment of the economics of OTEC in comparison with other energy production methods. It will be of interest to a wide range of professionals in energy research, power and mechanical engineering, and to upper-level undergraduate students taking courses in these fields.

Book Information

Series: Johns Hopkins University Applied Physics Laboratories Series in Science and Engineering
Hardcover: 480 pages
Publisher: Oxford University Press; 1 edition (March 17, 1994)
Language: English
ISBN-10: 0195071999
ISBN-13: 978-0195071993
Product Dimensions: 6.1 x 1.4 x 9.5 inches
Shipping Weight: 1.9 pounds (View shipping rates and policies)
Average Customer Review: 5.0 out of 5 stars 1 customer review
Best Sellers Rank: #3,738,838 in Books (See Top 100 in Books) #54 inÃ Â Books > Engineering & Transportation > Engineering > Energy Production & Extraction > Alternative & Renewable > Hydroelectric #888 inÃ Â Books > Science & Math > Earth Sciences > Geophysics #1211 inÃ Â Books > Science & Math > Nature & Ecology > Oceans & Seas > Oceanography

Customer Reviews

"Who would deny that we are once again in the middle of an energy/environmental/population crisis? Now, however, a critical mass of investigators employing the waters of Hawaii as their laboratory have developed the proof that ocean thermal energy and its by-productrs are an

important element in a rational and environmentally sustainable solution. This important work is being recognized. Relevant pilot projects now exist in Britain and Hawaii, and developments are under serious consideration in the Cook Islands, the Marshal Islands, and the Cape Verde Islands. The entrepreneurs who have independently entered the development process will soon be joined by others. This book will be their bible." --from the Foreword by John P. Craven, former Dean of Marine Engineering, University of Hawaii."Avery and Wu present the scientific and engineering fundamentals of ocean thermal energy conversion (OTEC), showing that the technology base is sufficiently well-established for large-scale demonstration plants to be built as forerunners to commercial plants and plantships that will be economically attractive and environmentally benign."--Future Survey"Drs. William Avery and Chih Wu have written a book that the former dean of marine engineering at the University of Hawaii declares will be the bible of entrepreneurs developing OTEC." --Energy Review"The authors comprehensively and accurately describe, in detail, the history, concepts and technical aspects of the Ocean Thermal Energy Conversion (OTEC) Program....a splendid reference Volume which future OTEC entrepreneurs will find most worthwhile." --Ocean Engineering"With the knowledge set forth in Renewable Energy from the Ocean and its bilbliography, a 40-MWe seagoing pilot plant could be constructed...The authors provide extensive evidence that with experience costs of OTEC would be subatantially reduced and that ultimately production of methanol and ammonia by OTEC could be made cost-competitive." --Science

William H. Avery is at The Johns Hopkins University. Chih Wu is at U.S. Naval Academy, Annapolis.

This is the most comprehensive resource of the science of OTEC. It is only for those who are serious in exploring this science of continuous solar energy from the oceans. It is presented as a science textbook at the college level. Simply excellent!

Hopkins Medicine) The Renewable Energy Handbook: The Updated Comprehensive Guide to Renewable Energy and Independent Living Johns Hopkins Medical Guide to Health After 50 (John Hopkins Medical Guide to Health After 50) Introduction to Coastal Engineering and Management (Advanced Series on Ocean Engineering) (Advanced Series on Ocean Engineering (Paperback)) Shipbuilders of the Venetian Arsenal: Workers and Workplace in the Preindustrial City (The Johns Hopkins University Studies in Historical and Political Science) When Champagne Became French: Wine and the Making of a National Identity (The Johns Hopkins University Studies in Historical and Political Science) How NATO Adapts: Strategy and Organization in the Atlantic Alliance since 1950 (The Johns Hopkins University Studies in Historical and Political Science) Erin's Daughters in America: Irish Immigrant Women in the Nineteenth Century (The Johns Hopkins University Studies in Historical and Political Science) Renewable Energy Made Easy: Free Energy from Solar, Wind, Hydropower, and Other Alternative Energy Sources The Homeowner's Guide to Renewable Energy: Achieving Energy Independence Through Solar, Wind, Biomass, and Hydropower The Homeowner's Guide to Renewable Energy: Achieving Energy Independence through Solar, Wind, Biomass and Hydropower (Mother Earth News Wiser Living) The Renewable Energy Handbook: A Guide to Rural Energy Independence, Off-Grid and Sustainable Living Handbook of Ocean Wave Energy (Ocean Engineering & Oceanography) Environmental Science: Active Learning Laboratories and Applied Problem Sets