Journal of Power Sources, 1 (1976/77) 378 - 379

Book Review

Annual Review of Energy, Volume One
Edited by J. M. Hollander and M. K. Simmons, Annual Reviews Inc., Palo Alto, 1976, 772 pages, $ 17.50.

The Annual Review of Energy is the latest addition to the Annual Reviews Inc. family, but probably in the future it will be like the Holy Bible for most of the readers of the *Journal of Power Sources*.

It is the intention of the Editors, J. M. Hollander and M. K. Simmons, both of the Lawrence Radiation Laboratory, that this series be devoted to all significant issues related to energy and its uses, to the social and environmental impacts of energy systems, to the economics and politics of energy and, eventually, to the scientific and technological frontiers in energy. There is therefore cause for complaint in that the first volume constitutes essentially an overview of the energy system of that particular geopolitical region that is the U.S.A., because for many countries the U.S.A. does not constitute the right example of a rational use of energy.

In spite of this limitation, which we hope will be amended in the future volumes of the review, and which is often tempered by comparisons with other countries, the chapters of this volume provide a comprehensive outlook on the major issues of a large and essentially integrated energy system.

The first part of the book deals with energy demand, supply and distribution and covers in great detail most of the topics that are conventionally of major interest to R&D people, *e.g.* the role of coal and oilshale as substitutes for oil and natural gas, the advantages and drawbacks of nuclear, geothermal and solar energy, the use of hydrogen as an energy vector and the future of advanced energy storage systems and converters.

In all cases the text gives an exhaustive historical, technical, social and political presentation of the problem and presents a rich list of tables, diagrams and of literature references (which cover the field up to 1975).

Criticism of unreasonable claims for the performances and economics of novel or advanced energy conversion systems is frequently made. If, however, the reader looks for indications for his research work, he notices that it is outside of the scope of this series to give such support.

The second part of the book covers the social and economical aspects of the production and consumption of energy. These aspects have been often neglected by scientists, who are conscious of their limited participation in the decision-making process, and are treated in detail in the chapters of the review which deal with energy saving or raising its productivity, and with the health and environmental consequences of the use and misuse of the energy. Emphasis is given also to the interconnections between the energy and the capital market, to the modelling and forecasting of energy systems and to the philosophical basis of risk analysis.

This last issue is of interest also outside of the energy business, because in most of the countries of West Europe there is a trend towards social risk-taking decisions in all the fields of human activities.

A few figures and remarks to describe other virtues of the book. 772 pages, 1361 references, a moderate price ($ 17.50) and a level which allows a reader with a high school degree to make a complete appraisal of all the issues.

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