

## Resenha

### **Electricity: Efficient end-use and new generation technologies, and their planning implications**

THOMAS B. JOHANSSON, BIRGIT BODLUND  
and ROBERT H. WILLIAMS, EDITORS

This book provides an up-to-date overview of energy-efficient electricity end-use and generation technologies, as well as policies and planning for the efficient production and use of electricity. The authors of the 27 chapters included in the book are energy-efficiency experts from Europe and the United States.

The book was sponsored by the Swedish State Electricity Board. It served as the basis for an international conference on the efficient production and use of electricity held in Sweden in May, 1989.

The chapters on end-use of electricity cover all important uses of electricity in Brazil including motor drive systems, lighting, appliances, and electrothermal processes. Other topics covered in this area that are of interest to energy planners, analysts, and engineers in Brazil include heat pumps, the design of residential and commercial buildings, electricity use by electronic equipment, and structural change as it relates to industrial electricity use. These chapters provide a thorough review of the latest opportunities for providing electricity services (motive power, light, refrigeration, etc.) in a more efficient and economical manner.

The chapters on electricity generation cover gas turbines, fluidized bed coal combustion, coal gasification, biomass gasification, solar photovoltaic cells, and fuel cells. All of these advancing technologies are significant for Brazil as the country diversifies its sources of electricity during the next 20 years. The chapters on gas turbines and biomass gasification are especially relevant given the emergence and potential growth of natural gas supplies and the plentiful biomass resources in Brazil.

The chapters on energy planning include reviews of utility electricity conservation programs in the U.S., energy service companies in France, and innovative approaches to marketing electric efficiency. Also, energy-efficient scenarios for the electricity sectors in Denmark and Sweden are presented and analyzed. The case study for Sweden is an exceptional example of integrated resource planning, whereby electricity supply and end-use efficiency options are evaluated on an equivalent basis.

The "Electricity" book could serve as an important reference for those working on electricity conservation in Brazil through the Programa Nacional de Conservação de Energia Elétrica (PROCEL) and other independent efforts. Also, utility industry, and government officials interested in the latest developments in conventional as well as unconventional electricity generating technologies will find the book useful. It has already become an important reference for energy planners and researchers in Europe and North America.

Electricity: Efficient End-Use and New Generation Technologies, and Their Planning Implications (hardcover, 960 pages) is available for US\$ 60 plus postage from:

American Council for an Energy-Efficient Economy (ACEEE) 1001 Connecticut Ave., N.W.

Suite 535

Washington, DC 20036

USA

(Summary and review by Howard S. Geller<sup>\*</sup>)

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<sup>\*</sup> Howard S. Geller is a mechanical engineer and the associate director of ACEEE in Washington, DC. He is a visiting researcher conducting energy conservation studies at the University of São Paulo and Eletrobrás during 1989-90.