

Energy From Biological Processes

July 1980

NTIS order #PB81-134769

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Library of Congress Catalog Card Number 80-600118

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

Foreword

This assessment responds to a request by the Senate Committee on Commerce, Science, and Transportation for an evaluation of the energy potential of various sources of plant and animal matter (biomass). This report complements an earlier OTA report on the *Application of Solar Technology to Today's Energy Needs* in evaluating the major solar energy resources available to the United States. The findings also will serve as part of the material to be used in an upcoming OTA assessment of synthetic fuels for transportation.

This volume presents analyses of prominent biomass issues, summaries of four biomass fuel cycles, a description of biomass' place in two plausible energy futures, and discussions of policy options for promoting energy from biomass. The four fuel cycles —wood, alcohol fuels, grasses and crop residues, and animal wastes —were chosen because of their near- to mid-term energy potential and because of the public interest in them. A second volume presents technical analyses of the resource base, conversion technologies, and end uses that provide a basis for the discussion in this volume. Also included in volume II are various unconventional approaches to bioenergy production as well as the use of biomass to produce chemicals.

We are indebted to the members of the advisory panel and to numerous individuals who have given so extensively of their time and talents in support of this assessment. Also the contributions of several contractors, who performed background analyses, are gratefully acknowledged.



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Acknowledgments

OTA thanks the following people who took time to provide information or review part or all of the study

- Don Augenstein, Flow Laboratories
Edgar E. Bailey, Davy McKee Corp.
Richard Bailie, Environmental Energy Engineering, Inc.
Weldon Barton, U.S. Department of Agriculture
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