

*Synthetic Fuels for Transportation: The  
Future Potential of Electric and Hybrid  
Vehicles*

March 1982

NTIS order #PB83-126086

**Synthetic Fuels  
for Transportation**

**Background Paper #1  
The Future Potential of  
Electric and  
Hybrid Vehicles**



OFFICE OF THE UNITED STATES  
Office of Technology Assessment  
Washington, D. C. 20540

# Synthetic Fuels for Transportation

Background Paper #1

## The Future Potential of Electric and Hybrid Vehicles

January 1982

LIBRARY  
OFFICE OF TECHNOLOGY ASSESSMENT  
CONGRESS OF THE UNITED STATES  
WASHINGTON, D.C. 20510

Prepared under contract by  
W.M. Carriere, W.F. Hamilton, and L.M. Morecraft  
of the General Research Corp.

OTA Background Papers are documents that contain information believed to be useful to various parties. The information undergirds formal OTA assessments or is an outcome of internal exploratory planning and evaluation. The material is usually not of immediate policy interest such as is contained in an OTA Report or Technical Memorandum, nor does it present options for Congress to consider.



CONGRESS OF THE UNITED STATES  
Office of Technology Assessment  
Washington, D.C. 20510

## **Contractor Acknowledgment**

This background paper was prepared for the Office of Technology Assessment as background information for its study, "Synthetic Fuels for Transportation," Much of the analysis on which this report is based was performed for the Department of Energy (DOE) by the General Research Corp. under the technical direction of Dr. Daniel P. Maxfield, Analysis and Assessment Branch, Office of Transportation Programs, DOE. Special thanks are due Dr. Maxfield for his cooperation and support in the preparation of this report.

**Library of Congress Catalog Card Number 82-600500**

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

# Preface

The Office of Technology Assessment (OTA), at the request of the Senate Committee on Commerce, Science, and Transportation, initiated a comparative study of automobile fuel efficiency and the technology of alternative energy sources. The assessment, "Synthetic Fuels for Transportation," will be completed in early 1982. Included in that analysis are the assessment of automobile engines, other vehicle systems, and electric and hybrid vehicles.

This contractor report was prepared by the General Research Corp., under the direction of Dr. D. P. Maxfield, as technical input to the OTA study. It deals with electric and hybrid vehicle systems and their possible benefits and impacts.

OTA does not necessarily agree or disagree with the contents of this contractor report, but feels that the material will be helpful to those who are interested in the detailed issues of electrification of transportation.

( )  
JOHN H. GIBBONS  
Director