TRANSPORTATION ENERGY CONSERVATION DATA BOOK

A Selected, Annotated Bibliography, Edition 3

By
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U. S. DEPARTMENT OF ENERGY

Division of Transportation Energy Conservation

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Information Center Complex

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FOREWORD

In January 1976, the Transportation Energy Conservation Division (TEC) of the Department of Energy (DOE) contracted with the Oak Ridge National Laboratory (ORNL) to develop a data base which would be used by the TEC staff in evaluation of current and proposed transportation-related technologies. In conjunction with this data collection and analysis activity, the ORNL Transportation Program is developing a comprehensive library of documents relevant to transportation end-use activities and energy conservation; this document collection is managed by the Energy and Environmental Response Center of the Information Center Complex at ORNL.

The first edition of the Transportation Energy Conservation Data Book\(^1\) was published in October 1976. Four quarterly supplements\(^2\) - 5 and the Transportation Energy Conservation Data Book, Edition 1.5\(^6\) were issued to augment the original document; each included an annotated bibliography. In October 1977, Transportation Energy Conservation Data Book, Edition 2\(^7\) was published. As a result of the extensive development of the collection


of documents relevant to transportation energy conservation, Transportation Energy Conservation Data Book: A Selected, Annotated Bibliography, Edition 2 is published as a separate document and was made available on a limited basis.

Due to the favorable response to that publication, Transportation Energy Conservation Data Book: A Selected Bibliography, Edition 3 is also being published as a separate report. This volume is a selected, keyworded bibliography of 819 references that represent the most current and relevant documents dealing with transportation energy demand and conservation. Also included are ten reviews of important data sources used in compiling Transportation Energy Conservation Data Book, Edition 3. Some of these reports were prepared for the TEC Division of DOE (e.g., SRI's reports on rail energy use and diesel cars); others were developed for agencies such as the National Academy of Sciences, the Congressional Budget Office, and the Department of Transportation.

Transportation Energy Conservation Data Book: A Selected Bibliography, Edition 3 was prepared not only to augment the Transportation Energy Conservation Data Book, Edition 3 and to assist TEC, but also to better document the developing resources at ORNL. Users are encouraged to send comments concerning errors or omissions, areas of emphasis, and document organization to the Data Management and Analysis Group, Energy Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37830.

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ACKNOWLEDGMENTS

The authors would like to acknowledge the support of Philip Patterson, Division of Transportation Energy Conservation of the Department of Energy, and the authors of the Transportation Energy Conservation Data Book, Edition 3 — Debbie Shonka, David Greene, Axel Rose, Jennifer Hill, Ken Reed, Eric Chen, Tim Gangaware, Brad Murphy, and Gwen Walton — who provided helpful suggestions and guidance in the preparation of this bibliography. Finally, thanks to Sherry Alcorn and Faye Fletcher of the Information Center Complex Computer Production Group, who carried out the computer production of the report, and to Carol McGlothlin, Information Center Complex Publications Office, for editorial assistance.
TRANSPORTATION ENERGY CONSERVATION DATA BOOK:
A SELECTED BIBLIOGRAPHY, EDITION 3

A. R. Ehrenshaft, B. Y. Barber, P. J. Carroll,
L. K. Plemons, P. A. Purnell, and R. S. Weaver

HIGHLIGHTS

This bibliography, the second in a series of reports on
energy conservation and consumption in the transportation sector,
was compiled as part of the continuing technical informa-
tion support provided by the Energy and Environmental Response
Center (EERC) to the Energy Division of the Oak Ridge National
Laboratory. The EERC maintains an online bibliographic data
base documenting energy conservation and consumption in vari-
ous economic sectors. The citations in this bibliography were
selected from a comprehensive file of transportation materials.

A companion volume, Transportation Energy Conservation
Data Book, Edition 3 (ORNL-5493) is an encyclopedia of sta-
tistical data on energy utilization by major transportation
modes, research and development of alternate transportation
modes and fuels (electric vehicles and alcohol fuels), and
other pertinent factors influencing energy consumption in the
transportation sector. These same subjects are included in
this bibliography, which is a desk-top compilation of refer-
cences. The data in the data book were taken from certain key
research studies. Reviews of these studies are included in
this bibliography.

All references are keyworded and arranged alphabetically
by author or corporate author if individual authors are not
cited in the document. Reports sponsored by the Transpor-
tation Energy Conservation Division of the Department of Energy
are listed in a separate section. Author, corporate author,
sponsor, report number, keyword, and permuted title indexes
are provided.

INTRODUCTION

Of the 71.1 quads of energy consumed in the United States in 1975,
18.5 quads were used by the transportation sector in the form of oil-
derived fuels — gasoline for automobiles; diesel fuels for trucks, trains,
and buses; and kerosene for jet aircraft. Major conservation efforts have
been launched by the Division of Transportation Energy Conservation (TEC)

of the Department of Energy to improve the efficiency of conventional vehicles and to develop electric vehicles and alternate fuels for gasoline. To support TEC's program, the Oak Ridge National Laboratory compiled a desktop reference of transportation statistics.

As a companion volume to the Transportation Energy Conservation Data Book, Edition 3 (ORNL-5493), this bibliography provides references on energy consumption by major transportation modes; conservation alternatives; research, development, and demonstration of alternate modes of transportation and fuels; and other factors influencing energy utilization in the transportation sector. Reviews of ten selected studies documenting energy use by different transportation modes are included in this bibliography. Reports sponsored by the Department of Energy (formerly the Energy Research and Development Administration), Division of Transportation Energy Conservation, are listed in a separate section. These references are also included in the main bibliography.

The 819 references contained in this bibliography are an update of Transportation Energy Conservation Data Book: A Selected, Annotated Bibliography, Edition 2 and are alphabetically arranged by author or corporate author. The sample reference below illustrates the format.

Sample

Author ---------------- Martini, W.R.
Corporate author ---------- Washington, University of, Joint Center for Graduate Study
Address: 100 Sprout Rd., Richland, WA 99352
Title: Stirling Engine Design Manual
Publication date --------- 1978, April
Sponsor: U.S. Dept. of Energy, Division of Transportation Energy Conservation; National Aeronautics and Space Administration, Lewis Research Center
Keywords: STIRLING ENGINES; DESIGN; MANUALS; BIBLIOGRAPHIES; PERFORMANCE; OPTIMIZATION; SIMULATION; MODELS; DIAGRAMS; RESEARCH
Availability: NTIS
The following indexes are provided: (1) author, (2) corporate author (the organization which performed the study), (3) sponsor (the organization which provided partial or complete funding for the study), (4) report number, (5) keywords (words which describe the main concepts of the document), and (6) permuted title. The permuted title index lists each document alphabetically by principal words in the title.

This bibliography was compiled as a result of the continuing technical information support which the Energy and Environmental Response Center, Information Center Complex, provides to the Energy Division of the Oak Ridge National Laboratory. These citations were selected from a comprehensive file of over 3000 documents concerning transportation energy consumption and conservation. This on-line retrievable data base is continually expanded and updated.

AVAILABILITY OF REPORTS

If no information on document availability is provided, or if only a price is listed, the document may be obtained from either the corporate author or the sponsor. Explanation of other availability information in citations is given below:

GPO — For sale by the Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402
(Prices subject to change)

NTIS — For sale by the National Technical Information Service
U.S. Department of Commerce
Springfield, Virginia 22161
(Prices subject to change)
REVIEWS OF SELECTED STUDIES
COMPARISON OF U.S. ENVIRONMENTAL PROTECTION AGENCY
FUEL ECONOMY RATINGS WITH ON-THE-ROAD EXPERIENCE

The U.S. Environmental Protection Agency (EPA) fuel economy ratings provide a complete data base for estimating fuel economy trends, but there has been much debate concerning whether these ratings are representative of actual fuel economy experienced on the road. Energy and Environmental Analysis, Inc., in collaboration with the U.S. Department of Energy, has completed the first significant contribution towards resolving this issue. Their study addresses whether EPA certification test results reflect actual on-the-road fuel economy for recent model years (1974-1977) and whether improvements in average EPA fuel economy with successive model years can be viewed as an expected reduction in actual fuel consumed per automobile-mile.

In its current phase, the study restricts its attention to available fuel economy measurements reported from (1) drivers' experiences (fleets and individual consumers) and (2) driving cycle results obtained from dynamometer and road tests. These observations, to be compared with each other and with EPA certification results published in the well-known mileage guide, fall into five categories:

1. Drivers' experiences
   a. Consumer driving records in which drivers kept track of gasoline purchased and miles driven. Although this is the most ideally suited data base for the analysis, this source consists primarily of surveys by private corporations (an automobile manufacturer and several oil companies).
   b. Owner estimates not based on actual measurements. These data are taken from the EPA emission factors program as well as from consumer complaint files.

2. Driving cycle results
   a. Fleet driving records from privately (several corporations) and publicly (state governments) owned fleets. This data base comprises more observations than any other on-the-road data source.
b. **In-use dynamometer tests**, some of which were performed as part of the EPA emissions factor program. The remainder were carried out by several corporations (primarily oil companies), many of which supplied consumer driving records as well.

c. **Road tests** which measure on-the-road fuel economy on prescribed driving cycles (e.g., Consumers Union).

Approximately 5000 in-use vehicles representing model years 1974 through 1977 comprise the data base summarized in Table 1.

The study systematically compares these observations with EPA certification test results on a model-to-model basis in search of various types of discrepancies:

1. Absolute differences between EPA ratings and on-the-road experience
2. Relative differences (i.e., whether the EPA-implied ranking of models corresponds with the ranking from actual experience)
3. Variation of the discrepancies over time (more minor effects, among manufacturers for example, are also explored)

The causes for the discrepancies, although discussed only briefly in the study, were seen to stem from two sources: (1) vehicle differences which reflect the extent to which the prototype EPA-tested vehicle represents all cars of that model type and which would be seen in a comparison of EPA certification ratings with in-use dynamometer results and (2) operational differences which would be seen in a comparison of the in-use dynamometer tests and on-the-road performance (the effect of variable driving practices among vehicles tested was felt to be suppressed in the aggregation of results for each model type).

Alternative statistical techniques were tested, and the final form of the regression analysis was based on a simple linear relationship between on-the-road and EPA fuel economy measurements:

\[
on\text{on-road miles per gallon} = \alpha + \beta \times \text{(test miles per gallon)}.
\]  

(1)

Within each of the five basic data types, the average of (often several) in-use results for each model was used to avoid undue weighting of a model with many observations. (The results changed significantly between individual and aggregated treatment of models.) A comparison of two data sets involved a linear regression (Eq. 1) of these average data by model type.
Table 1. Summary of data sources for comparison of in-use experience with EPA certification results

<table>
<thead>
<tr>
<th>Source</th>
<th>Model year</th>
<th>Total number of data points</th>
<th>Fleet operations</th>
<th>Owners estimates</th>
<th>Consumer driving</th>
<th>Dynamometer tests</th>
<th>Road tests</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA certification</td>
<td>1974-1977</td>
<td>1831</td>
<td></td>
<td></td>
<td></td>
<td>C</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>Union Oil</td>
<td>1975</td>
<td>107</td>
<td></td>
<td></td>
<td></td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dupont</td>
<td>1974-1976</td>
<td>66</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>General Motors</td>
<td>1975-1976</td>
<td>1714</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobil Oil</td>
<td>1974-1977</td>
<td>63</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Shell Oil</td>
<td>1975-1977</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Motor Trend</td>
<td>1974-1977</td>
<td>121</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shell Canada</td>
<td>1975</td>
<td>46</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Consumers Union</td>
<td>1975-1977</td>
<td>83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRW</td>
<td>1974-1977</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maryland Department of Transportation</td>
<td>1974-1977</td>
<td>845</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
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<tr>
<td>Maine Department of Transportation</td>
<td>1974-1977</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
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<td>X</td>
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<td>EPA emission factors data</td>
<td>1974-1976</td>
<td>1287</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>C</td>
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<tr>
<td>Industrial</td>
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<td></td>
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<td>hydrocarbons</td>
<td>1976</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>J. Class Leasing</td>
<td>1977</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>New Jersey Department of Transportaion</td>
<td>1974-1975</td>
<td>211</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>C</td>
</tr>
<tr>
<td>Texaco Oil</td>
<td>1974-1977</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>C</td>
</tr>
<tr>
<td>EPA</td>
<td>1974-1976</td>
<td>687</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>API</td>
<td>1974-1975</td>
<td>4075</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>AT&amp;T</td>
<td>1976</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Amoco Oil</td>
<td>1974-1977</td>
<td>156</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Driving cycle: C – certification test procedure; S – SAE driving cycle; O – other.

To determine which observations would provide a valid representation of on-the-road experience to compare with EPA tests, the five basic data types were analyzed with the following conclusions:

1. Road-test fuel economy results (Consumers Union and Motor Trend) are systematically higher than on-the-road experience.

2. Owner estimates compare quite closely with actual on-the-road measurements but are eliminated from the final analysis because of their inherent uncertainty. As expected, a separate set of owner estimates from consumer complaints are considerably lower than on-the-road experience, by an average of 1 mpg.

3. In-use dynamometer test results compare fairly closely with EPA ratings, with the results for each model year falling systematically above the ratings for low-mileage cars and below the ratings for high-mileage cars.

4. Fleet and consumer-driving fuel economy records give sufficiently similar results for all model years so that they can be combined for comparison with EPA tests.

With this preliminary analysis, fleet results combined with consumer-driving results were adopted as the data base most representative of on-the-road experience. These results were compared with EPA certification (composite, city) and in-use dynamometer test results.

The results of comparing these on-the-road results with EPA composite fuel economy ratings for each model year are summarized in the linear fits in Fig. 1. The EPA tests fairly closely approximate on-the-road experience for 1974 models; they are progressively less representative with each newer model year through 1977. The divergence is substantial for higher-mileage cars. This analysis suggests that, for a car whose actual fuel economy is 20 mpg, the EPA testing overestimates actual fuel economy by 20% in 1976 and 30% in 1977.

Throughout the analysis, the effects of vehicle mileage are obviously important but are difficult to quantify; the sample would ideally include 1974 model-year cars with fuel economy records from 1974, when they were new, as well as from a more recent year. In the study, no adjustment was made for vehicle mileage with the justification, supported by an earlier study, that fuel economy tends to improve during a vehicle's first few years.
Fig. 1. Linear relation of EPA certification to on-road fuel economy for model years 1974 through 1977. Source: Compiled from B. D. McNutt, D. Pirkey, R. Dulla, and C. Miller. 1978. A comparison of fuel economy results from EPA tests and actual in-use experience, 1974-1977 model year cars. U.S. Department of Energy, Washington, D.C. Fig. 8a-8d, pp. 31-34.

An interesting result is that if EPA city instead of composite results are used in the analysis, the same trend of increasing discrepancy with recent model years is evident. For 1974 models, EPA city tests underestimate on-the-road performance, but in 1977 they overestimate a 20-mpg performance by 15%. Thus, the EPA city rating, which is viewed by many as the "worst" fuel economy a car is likely to experience, actually underestimates actual mileage for recent models.
Given this absolute discrepancy between EPA results and actual fuel economy, an analysis of ranking was applied to the observations to determine whether EPA results provide a valid relative ranking of models for any model year. For each comparison, the likelihood of a reversal of rank for a given miles-per-gallon difference was calculated. For on-the-road compared with EPA results, the likelihood is 40% for a difference of 1 mpg but is only 10% if the results differ by 4 mpg. Because EPA composite tests for many models overestimate on-the-road performance by 4 mpg or more, the ranking may apply to more models than one could infer from the way the conclusions are presently stated in the report. In the next phase of the study, alternative ways of presenting the ranking analysis should be explored.

The study realistically presents its conclusions as preliminary, with plans for augmenting the data base and applying more sophisticated statistical methods. A major effort in augmenting the data base is needed. Answering unresolved questions and verifying preliminary conclusions will require a new large set of systematic measurements by individual drivers so that accuracy and consistency of data can be assured. (The small set of "consumer driving" data in this study were generated by corporations and to some extent may be inherently similar to fleet data.) With a planned extensive data collection program, vehicle mileage could become a significant variable in the analysis to help explain the trends seen for successive model years. Further resolution of EPA results versus actual fuel economy results is sufficiently important to warrant a major data collection effort. The methodology developed for this study may well serve as the model for future analyses of the problem.

References


Reviewed by
Margaret Fels
Princeton University
Princeton, New Jersey
In response to a request from Senator Lloyd Bentsen, the Congressional Budget Office prepared a summary of existing estimates of energy consumption by urban transportation modes and presented a systematic methodology for using these estimates to compare the energy efficiency of these modes.\(^1\) The overall goal of the study was to assess the energy conservation potential of available modes.

In order to include a complete range of contributions to the overall energy use, a hierarchy of four levels of comprehensiveness was developed, as shown in Fig. 1. Energy intensity measures the energy required to move the vehicle and is generally expressed as energy use per passenger-mile (propulsion energy use per vehicle-mile divided by the average occupancy per vehicle). Line-haul energy includes in the propulsion energy secondary energy contributions from vehicle manufacture, station operation, etc. Modal energy measures the average energy consumed per mile of a trip, which may include an access mode in addition to the main mode, and extra nonproductive travel miles (circuitry) due to transit routing. Program energy, the amount of energy saved per mile for a trip by the new mode when compared with the alternative mode used before the new mode was available, provides a measure of fuel savings to be attributed to new modes.

Because of the number of different estimates available for the components which make up these measures of energy efficiency, a range of estimates is carefully presented for each component. Tables 1 and 2 represent excellent summaries of existing estimates for vehicle propulsion energy and average occupancy. Similar tables for indirect energy requirements and access modes are included in the report. Tables 3-5 summarize the resulting middle estimate adopted in the study. Analogous tables are also provided for low and high estimates.

Although the estimates of line-haul and modal energy are valuable, the lengthy conclusions of the study are derived exclusively from the program energy. Unfortunately, as one proceeds up the hierarchy from energy intensiveness to program energy, the available data become very sparse and much less reliable. For example, the estimates of percentage of trip devoted to access are generalized from a single data point for the Lindenwold Line...
### Basic energy components

- Propulsion energy per vehicle-mile
- Average number of occupants
- Station and maintenance energy
- Construction energy
- Vehicle manufacturing energy
- Mode of access
- Fraction of trip devoted to access
- Circuity
- Source of new patronage

### Measures of energy use

- Energy intensiveness
- Line-haul energy
- Modal energy
- Program energy

---

**Fig. 1.** Hierarchy of measures of energy use. Source: Adapted from D. Kulash, R. Mudge, and D. Prywse. 1977. Urban transportation and energy: The potential savings of different modes. Congressional Budget Office report to U.S. Senate Committee on Environment and Public Works. Serial No. 95-8. p. 8.
Table 1. Various estimates of vehicle propulsion energy for urban transportation modes: averages for general urban areas and specific cities (systems)

<table>
<thead>
<tr>
<th>Mode of transportation</th>
<th>Vehicle propulsion energy$^a$</th>
<th>City (system)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(mpg)$^b$</td>
<td>(Btu/mile)</td>
</tr>
<tr>
<td><strong>Automobile</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td>16,790</td>
<td>General urban (six seat)$^c$</td>
</tr>
<tr>
<td>11.4</td>
<td>10,970</td>
<td>General urban$^d$</td>
</tr>
<tr>
<td>13.5</td>
<td>9,260</td>
<td>General urban$^e$</td>
</tr>
<tr>
<td>13.9</td>
<td>8,990</td>
<td>New York metropolitan area (1972)$^f$</td>
</tr>
<tr>
<td>15.0</td>
<td>8,330</td>
<td>General urban (four seat)$^g$</td>
</tr>
<tr>
<td>22.5</td>
<td>5,260</td>
<td>General urban (light car)$^h$</td>
</tr>
<tr>
<td><strong>Vanpool</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.0</td>
<td>13,900</td>
<td>Minneapolis$^i$</td>
</tr>
<tr>
<td><strong>Dial-a-ride</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>29,780</td>
<td>Los Angeles$^j$</td>
</tr>
<tr>
<td>7.0</td>
<td>17,850</td>
<td>General urban (gas vehicle)$^g$</td>
</tr>
<tr>
<td>7.3-9.0</td>
<td>13,900-17,130</td>
<td>Nine cities$^d$</td>
</tr>
<tr>
<td>13.5</td>
<td>9,250</td>
<td>General urban (diesel vehicle)$^g$</td>
</tr>
<tr>
<td><strong>Heavy rail (old)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.52</td>
<td>241,240</td>
<td>New York City (Staten Island Rapid Transit)$^k$</td>
</tr>
<tr>
<td>0.52</td>
<td>240,880</td>
<td>Boston (includes light rail)$^k$</td>
</tr>
<tr>
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<td>93,830</td>
<td>Cleveland$^k$</td>
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<tr>
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<td>73,180</td>
<td>New York City (Transit Authority)$^f$</td>
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<td>72,880</td>
<td>New York/New Jersey (PATH)$^k$</td>
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<td>37,800-62,000</td>
<td>Five cities (1964)$^l$</td>
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<td>New York City (Transit Authority)$^m$</td>
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<td>4.00</td>
<td>31,300</td>
<td>Cleveland$^e$</td>
</tr>
<tr>
<td>Mode of transportation</td>
<td>Vehicle propulsion energy(^a) (mpg(^b))</td>
<td>(Btu/mile)</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Heavy rail (new)</td>
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</tr>
<tr>
<td>1.07</td>
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</tr>
<tr>
<td>1.15</td>
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<tr>
<td>1.23</td>
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<td>1.44</td>
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<td>2.23</td>
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<tr>
<td>2.57-2.84</td>
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</tr>
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<td>Commuter rail</td>
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</tr>
<tr>
<td>0.80</td>
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</tr>
<tr>
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<td>103,000</td>
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<td>1.27</td>
<td>98,213</td>
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</tr>
<tr>
<td>1.80-2.90</td>
<td>43,150-59,540</td>
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</tr>
<tr>
<td>Light rail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.19</td>
<td>105,000</td>
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<tr>
<td>1.45</td>
<td>86,400</td>
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</tr>
<tr>
<td>1.54</td>
<td>81,284</td>
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</tr>
<tr>
<td>1.66</td>
<td>75,147</td>
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</tr>
<tr>
<td>2.17</td>
<td>57,750</td>
<td></td>
</tr>
<tr>
<td>2.41</td>
<td>51,992</td>
<td></td>
</tr>
<tr>
<td>Bus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.6</td>
<td>34,940</td>
<td></td>
</tr>
<tr>
<td>3.6</td>
<td>34,740</td>
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</tr>
<tr>
<td>3.8</td>
<td>32,660</td>
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</tr>
<tr>
<td>4.0</td>
<td>31,270</td>
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Table 1 (continued)

<table>
<thead>
<tr>
<th>Mode of transportation</th>
<th>Vehicle propulsion energy (^a)</th>
<th>City (system)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(mpg) (^b)</td>
<td>(Btu/mile)</td>
</tr>
<tr>
<td>Personal rapid transit</td>
<td>6.2–13.1</td>
<td>Cleveland (^c)</td>
</tr>
<tr>
<td></td>
<td>9.6–31.0</td>
<td>Atlanta (projected, 2000) (^q)</td>
</tr>
<tr>
<td>Group rapid transit</td>
<td>4.2–15.4</td>
<td>Northern New Jersey (^f)</td>
</tr>
<tr>
<td>Shuttle loop transit</td>
<td>7.4–11.4</td>
<td>General urban (^c)</td>
</tr>
<tr>
<td>Downtown people mover</td>
<td>1.75</td>
<td>General urban (^c)</td>
</tr>
</tbody>
</table>

\(^a\) Not all sources have used the same conversion factors between different energy units. For consistency, estimates have been converted by using the following equations: 1 gal gasoline = 125,071 Btu and 1 KWhr(e) = 10,500 Btu.

\(^b\) Miles per gallon of gasoline or equivalent.


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for Environmental Studies, Princeton University. Report PU/CES 44. (To be published
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tion and cost for the journey to work. Prepared for Federal Energy Administration.
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Area Rapid Transit District.
Metropolitan Atlanta Rapid Transit Authority. No date. The effects of MARTA
on gasoline consumption in the Atlanta region.
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p. 5-11.

Source: Adapted from D. Kulash, R. Mudge, and D. Prywse. 1977. Urban transpor-
tation and energy: The potential savings of different modes. Congressional Budget
Office report to U.S. Senate Committee on Environmental and Public Works. Serial No.
95-8. Table 1.
Table 2. Various estimates of vehicle occupancy for urban transportation modes: averages for general urban areas and specific cities (systems)

<table>
<thead>
<tr>
<th>Mode and city (system)</th>
<th>Vehicle occupancy (passenger-miles per vehicle-mile)</th>
<th>Load factor (passenger-miles per seat-mile)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Automobile</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National home-to-work and work-related travel&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.4</td>
<td>0.28</td>
</tr>
<tr>
<td>Average for specific cities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philadelphia&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.14</td>
<td>0.23</td>
</tr>
<tr>
<td>New Jersey&lt;sup&gt;c&lt;/sup&gt;</td>
<td>1.12-1.24</td>
<td>0.22-0.25</td>
</tr>
<tr>
<td>Albuquerque&lt;sup&gt;d&lt;/sup&gt;</td>
<td>1.43</td>
<td>0.29</td>
</tr>
<tr>
<td>Chicago&lt;sup&gt;d&lt;/sup&gt;</td>
<td>1.43</td>
<td>0.29</td>
</tr>
<tr>
<td>San Diego&lt;sup&gt;d&lt;/sup&gt;</td>
<td>1.48</td>
<td>0.30</td>
</tr>
<tr>
<td>Baltimore&lt;sup&gt;d&lt;/sup&gt;</td>
<td>1.49</td>
<td>0.30</td>
</tr>
<tr>
<td>New York metropolitan area&lt;sup&gt;e&lt;/sup&gt;</td>
<td>1.5</td>
<td>0.30</td>
</tr>
<tr>
<td>National urban area average&lt;sup&gt;d&lt;/sup&gt;</td>
<td>1.63</td>
<td>0.33</td>
</tr>
<tr>
<td><strong>Light rail</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average for specific cities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newark&lt;sup&gt;f&lt;/sup&gt;</td>
<td>9.4</td>
<td>0.15</td>
</tr>
<tr>
<td>Philadelphia (SEPTA, city)&lt;sup&gt;f&lt;/sup&gt;</td>
<td>17.7</td>
<td>0.28</td>
</tr>
<tr>
<td>Philadelphia (SEPTA, Red Arrow)&lt;sup&gt;f&lt;/sup&gt;</td>
<td>17.8</td>
<td>0.28</td>
</tr>
<tr>
<td>San Francisco&lt;sup&gt;f&lt;/sup&gt;</td>
<td>23.6</td>
<td>0.37</td>
</tr>
<tr>
<td>Cleveland&lt;sup&gt;d&lt;/sup&gt;&lt;sup&gt;f&lt;/sup&gt;</td>
<td>26.5</td>
<td>0.42</td>
</tr>
<tr>
<td>Pittsburgh&lt;sup&gt;f&lt;/sup&gt;</td>
<td>27.8</td>
<td>0.44</td>
</tr>
<tr>
<td><strong>Heavy rail</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York/New Jersey (PATH)&lt;sup&gt;f&lt;/sup&gt;</td>
<td>17.3</td>
<td>0.24</td>
</tr>
<tr>
<td>Chicago (1973)&lt;sup&gt;g&lt;/sup&gt;</td>
<td>18.6</td>
<td>0.26</td>
</tr>
<tr>
<td>New York City (Transit Authority, 1973)&lt;sup&gt;g&lt;/sup&gt;</td>
<td>19.7</td>
<td>0.27</td>
</tr>
<tr>
<td>Boston (includes light rail)&lt;sup&gt;f&lt;/sup&gt;</td>
<td>25.6</td>
<td>0.36</td>
</tr>
<tr>
<td>Chicago&lt;sup&gt;f&lt;/sup&gt;</td>
<td>20.7</td>
<td>0.29</td>
</tr>
<tr>
<td>Cleveland&lt;sup&gt;f&lt;/sup&gt;</td>
<td>23.9</td>
<td>0.33</td>
</tr>
<tr>
<td>New York City (Transit Authority)&lt;sup&gt;f&lt;/sup&gt;</td>
<td>25.0</td>
<td>0.35</td>
</tr>
<tr>
<td>Philadelphia (SEPTA)&lt;sup&gt;f&lt;/sup&gt;</td>
<td>28.8</td>
<td>0.40</td>
</tr>
<tr>
<td>New systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Francisco (BART)&lt;sup&gt;f&lt;/sup&gt;</td>
<td>19.8</td>
<td>0.27</td>
</tr>
<tr>
<td>San Francisco (BART, 1975)&lt;sup&gt;g&lt;/sup&gt;</td>
<td>21.4</td>
<td>0.30</td>
</tr>
<tr>
<td>Philadelphia (Lindenwold)&lt;sup&gt;f&lt;/sup&gt;</td>
<td>22.5</td>
<td>0.31</td>
</tr>
<tr>
<td>National urban area average&lt;sup&gt;f&lt;/sup&gt;</td>
<td>24.5</td>
<td>0.34</td>
</tr>
<tr>
<td><strong>Urban bus</strong></td>
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</tr>
<tr>
<td>Average for specific cities</td>
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<td></td>
</tr>
<tr>
<td>Albuquerque&lt;sup&gt;d&lt;/sup&gt;</td>
<td>4.9</td>
<td>0.10</td>
</tr>
<tr>
<td>Southern Connecticut&lt;sup&gt;e&lt;/sup&gt;</td>
<td>9.8</td>
<td>0.20</td>
</tr>
<tr>
<td>Chicago&lt;sup&gt;d&lt;/sup&gt;</td>
<td>10.9</td>
<td>0.22</td>
</tr>
<tr>
<td>San Diego&lt;sup&gt;d&lt;/sup&gt;</td>
<td>11.7</td>
<td>0.23</td>
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### Table 2 (continued)

<table>
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<tr>
<th>Mode and city (system)</th>
<th>Vehicle occupancy (passenger-miles per vehicle-mile)</th>
<th>Load factor (passenger-miles per seat-mile)</th>
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<tbody>
<tr>
<td>New York City (Transit Authority)</td>
<td>13.8</td>
<td>0.28</td>
</tr>
<tr>
<td>Baltimore</td>
<td>19.1</td>
<td>0.28</td>
</tr>
<tr>
<td>National urban area average, 1973</td>
<td>11.5</td>
<td>0.23</td>
</tr>
<tr>
<td>Dial-a-ride</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nine cities</td>
<td>1.00-2.86</td>
<td>0.05-0.15</td>
</tr>
<tr>
<td>Seven cities</td>
<td>0.8-3.3</td>
<td>0.04-0.17</td>
</tr>
<tr>
<td>Median</td>
<td>1.62</td>
<td>0.09</td>
</tr>
<tr>
<td>Commuter rail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average for specific cities</td>
<td></td>
<td></td>
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<tr>
<td>New York metropolitan area</td>
<td>24.2</td>
<td>0.24</td>
</tr>
<tr>
<td>Boston</td>
<td>25.6</td>
<td>0.26</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>29.4</td>
<td>0.29</td>
</tr>
<tr>
<td>New York metropolitan area</td>
<td>32.2</td>
<td>0.32</td>
</tr>
<tr>
<td>Chicago</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burlington Northern</td>
<td>58.7</td>
<td>0.59</td>
</tr>
<tr>
<td>Chicago and Northwestern</td>
<td>47.7</td>
<td>0.48</td>
</tr>
<tr>
<td>Illinois Central</td>
<td>59.5</td>
<td>0.60</td>
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<tr>
<td>Milwaukee</td>
<td>50.2</td>
<td>0.50</td>
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<tr>
<td>Norfolk and Western</td>
<td>20.7</td>
<td>0.21</td>
</tr>
<tr>
<td>Rock Island</td>
<td>36.7</td>
<td>0.37</td>
</tr>
<tr>
<td>San Francisco</td>
<td>47.5</td>
<td>0.48</td>
</tr>
<tr>
<td>National urban area average</td>
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<td>0.43</td>
</tr>
<tr>
<td>Vanpool</td>
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<td></td>
</tr>
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<td>Minneapolis (3M Company)</td>
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<td>0.87</td>
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<tr>
<td>Carpool</td>
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</tr>
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<td>0.59</td>
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<tr>
<td>El Segunda, California</td>
<td>3.09</td>
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<td>Boston</td>
<td>3.16</td>
<td>0.63</td>
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<tr>
<td>Connecticut</td>
<td>3.70</td>
<td>0.74</td>
</tr>
</tbody>
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---


Table 3. Middle estimates of basic components of operating energy intensiveness and line-haul energy by urban transportation modes (Btu/vehicle-mile)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Propulsion energy</th>
<th>Average number of occupants</th>
<th>Station and maintenance energy</th>
<th>Construction energy</th>
<th>Vehicle manufacturing energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-occupant automobile</td>
<td>11,000</td>
<td>1.0</td>
<td>2,000</td>
<td>125</td>
<td>1,100</td>
</tr>
<tr>
<td>Average automobile</td>
<td>11,000</td>
<td>1.4</td>
<td>2,000</td>
<td>125</td>
<td>1,100</td>
</tr>
<tr>
<td>Carpool</td>
<td>11,000</td>
<td>3</td>
<td>2,000</td>
<td>125</td>
<td>1,100</td>
</tr>
<tr>
<td>Vanpool</td>
<td>14,000</td>
<td>9</td>
<td>2,000</td>
<td>200</td>
<td>2,000</td>
</tr>
<tr>
<td>Dial-a-ride</td>
<td>15,500</td>
<td>1.6</td>
<td>2,000</td>
<td>200</td>
<td>2,000</td>
</tr>
<tr>
<td>Heavy rail (old)</td>
<td>61,000</td>
<td>24</td>
<td>9,000</td>
<td>3,000</td>
<td>1,500</td>
</tr>
<tr>
<td>Heavy rail (new)</td>
<td>75,000</td>
<td>21</td>
<td>15,000</td>
<td>4,000</td>
<td>1,500</td>
</tr>
<tr>
<td>Commuter rail</td>
<td>105,000</td>
<td>40</td>
<td>7,000</td>
<td>1,200</td>
<td>2,500</td>
</tr>
<tr>
<td>Light rail</td>
<td>75,000</td>
<td>20</td>
<td>7,000</td>
<td>1,700</td>
<td>2,000</td>
</tr>
<tr>
<td>Bus</td>
<td>30,000</td>
<td>11.5</td>
<td>900</td>
<td>370</td>
<td>1,200</td>
</tr>
<tr>
<td>Personal rapid transit</td>
<td>11,000</td>
<td>2</td>
<td>5,000</td>
<td>300</td>
<td>1,000</td>
</tr>
<tr>
<td>Group rapid transit</td>
<td>20,000</td>
<td>6</td>
<td>6,000</td>
<td>600</td>
<td>1,000</td>
</tr>
<tr>
<td>Shuttle loop transit</td>
<td>23,000</td>
<td>10</td>
<td>7,000</td>
<td>600</td>
<td>1,000</td>
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</tbody>
</table>

Table 4. Middle estimates of access, circuity, and source of patronage by urban transportation modes

<table>
<thead>
<tr>
<th>Mode</th>
<th>Mode of access (%)</th>
<th>Percentage of trip devoted to access</th>
<th>Circuity (relative to trip by auto)</th>
<th>Percentage of new patrons by former mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automobile</td>
<td>NA</td>
<td>0</td>
<td>1.0</td>
<td>NA</td>
</tr>
<tr>
<td>Carpool</td>
<td>NA</td>
<td>0</td>
<td>1.15</td>
<td>15 bus</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25 carpool</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60 single-occupant auto</td>
</tr>
<tr>
<td>Vanpool</td>
<td>NA</td>
<td>0</td>
<td>1.2</td>
<td>5 bus</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40 carpool</td>
</tr>
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<td></td>
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<td></td>
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<td>55 single-occupant auto</td>
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<tr>
<td>Dial-a-ride</td>
<td>NA</td>
<td>0</td>
<td>1.4</td>
<td>10 bus</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25 walk</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>45 auto (15 taxi)</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>20 new trip</td>
</tr>
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<td>20 bus</td>
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<td>1.2</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>40 auto</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>40 walk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy rail (new)</td>
<td>10 bus</td>
<td>18</td>
<td>1.3</td>
<td>45 bus</td>
</tr>
<tr>
<td></td>
<td>70 auto</td>
<td></td>
<td></td>
<td>35 auto</td>
</tr>
<tr>
<td></td>
<td>20 walk</td>
<td></td>
<td></td>
<td>10 new tripb</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 other</td>
</tr>
<tr>
<td>Commuter rail</td>
<td>5 bus</td>
<td>18</td>
<td>1.3</td>
<td>30 bus</td>
</tr>
<tr>
<td></td>
<td>15 walk</td>
<td></td>
<td></td>
<td>40 auto</td>
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<tr>
<td></td>
<td>80 auto</td>
<td></td>
<td></td>
<td>10 new tripb</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20 other</td>
</tr>
<tr>
<td>Light rail</td>
<td>20 bus</td>
<td>10</td>
<td>1.2</td>
<td>50 bus</td>
</tr>
<tr>
<td></td>
<td>50 walk</td>
<td></td>
<td></td>
<td>30 auto</td>
</tr>
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<td></td>
<td>30 auto</td>
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<td></td>
<td>10 new tripb</td>
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<td></td>
<td>10 other</td>
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<tr>
<td>Bus (express)</td>
<td>25 auto</td>
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<td>1.1</td>
<td>25 bus</td>
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<td>75 walk</td>
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<td>55 auto</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td>10 new tripb</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 other</td>
</tr>
</tbody>
</table>


aNA — Not applicable.

bThere is no diversion from a former mode; a person who previously did not use a mode of urban transportation is using the new mode.

Table 5. Middle estimates for various measures of energy requirements by urban transportation modes (Btu/passenger-mile)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Operating energy intensity</th>
<th>Line-haul energy</th>
<th>Modal energy</th>
<th>Program energy (net savings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-occupant automobile</td>
<td>11,000</td>
<td>14,220</td>
<td>14,220(^a)</td>
<td>NA(^b)</td>
</tr>
<tr>
<td>Average automobile</td>
<td>7,860</td>
<td>10,160</td>
<td>10,160(^a)</td>
<td>NA</td>
</tr>
<tr>
<td>Carpool</td>
<td>3,670</td>
<td>4,740</td>
<td>5,450</td>
<td>4,890</td>
</tr>
<tr>
<td>Vanpool</td>
<td>1,560</td>
<td>2,020</td>
<td>2,420</td>
<td>7,720</td>
</tr>
<tr>
<td>Dial-a-ride</td>
<td>9,690</td>
<td>12,310</td>
<td>17,230</td>
<td>(12,350)(^c)</td>
</tr>
<tr>
<td>Heavy rail (old)</td>
<td>2,540</td>
<td>3,100</td>
<td>3,990</td>
<td>NA</td>
</tr>
<tr>
<td>Heavy rail (new)</td>
<td>3,570</td>
<td>4,550</td>
<td>6,580</td>
<td>(980)(^c)</td>
</tr>
<tr>
<td>Commuter rail</td>
<td>2,625</td>
<td>2,890</td>
<td>5,020</td>
<td>970</td>
</tr>
<tr>
<td>Light rail</td>
<td>3,750</td>
<td>4,280</td>
<td>5,060</td>
<td>30</td>
</tr>
<tr>
<td>Bus</td>
<td>2,610</td>
<td>2,820</td>
<td>3,070</td>
<td>3,590(^d)</td>
</tr>
<tr>
<td>Personal rapid transit</td>
<td>5,500</td>
<td>8,650</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>Group rapid transit</td>
<td>3,330</td>
<td>4,600</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>Shuttle loop transit</td>
<td>2,300</td>
<td>3,160</td>
<td>e</td>
<td>e</td>
</tr>
</tbody>
</table>

\(^a\)By definition, there are no access energy requirements for automobiles, so modal energy equals line-haul energy.
\(^b\)NA - Not applicable.
\(^c\)Energy loss.
\(^d\)For new express bus service. Conventional bus service would show smaller savings.
\(^e\)Data not available for access modes and source of patronage since these modes are still largely under development.

commuter rail service combined with the authors' judgement: "The access factor is likely to be smaller for systems that are less suburb-oriented and for those with more extensive line-haul networks (such as buses)."

Data on access modes, circuities, and sources of new patronage from new lines are similarly created. The conclusions based on this evaluation of program energy point to vanpooling and buses as offering the greatest energy conservation potential, with rapid rail transit demonstrating a negative program energy due to an overall increase in energy consumed for travel after the institution of the new system.

The latter conclusion generated considerable controversy and culminated in a large set of rebuttals which appeared in the hearings. The negative program energy for rail transit originates to a great extent from new trips generated by a new system: the net energy effect of new trips is to add energy to the total energy use for travel. Many critics objected to this method of energy accounting for new trips which, over the longer run, might lead to even greater energy use in the absence of the new mode. In addition, the study was criticized for comparing modes on an average basis rather than in the context of specific systems.

These comments notwithstanding, the Congressional Budget Office study presents the best, most concise summary of estimates of energy use by existing modes in the literature. Used in the proper context, these estimates can be valuable input for energy analyses of urban transportation systems.

References


Reviewed by
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The Energy Information Administration 1977 Annual Report to Congress outlines the activities of the Energy Information Administration (EIA) in 1977, presents historical data on the energy situation, and gives projections for energy development and use through the year 2000. The report is published in three volumes. Volume I describes the organization, responsibilities, activities, and accomplishments of each office within EIA. Volume II, Forecasts of Energy Supply and Demand, presents separate short-term and mid-term projections, assuming the continuation of existing energy policies, but with assumed variations in levels of economic growth, growth of oil and gas production, and real price in world oil. Volume III, Statistics and Trends of Energy Supply, Demand, and Prices, contains statistical charts and tables of exploration, development, production, processing, distribution, sale, and consumption of various energy sources, both past and present.

The EIA report is significant because it not only presents the current state of the energy situation, but it also forecasts the effects of existing energy policy. According to EIA, the United States has been a net importer of fossil fuels since 1953, with the gap between imports and exports increasing steadily. All EIA projections imply that existing U.S. energy policy will not be able to reduce this growing dependence on imports.

Assuming the continuation of existing energy policy, EIA projects that energy use through 1990 will grow at a lower rate than the growth rate experienced since 1960. This lower rate of energy use is a result of conservation and of consumer reaction to higher energy prices. However, domestic energy production is projected to increase at lower rates than the projected increase in consumption. Although rapid increases are projected in the domestic supply of coal, nuclear, and other domestic fuel sources, total domestic oil and gas production is projected to decrease or, at best, to be sustained at current levels. Thus, dependence on foreign oil and other imports will continue to grow.
The short-term and mid-term EIA projections were obtained from an integrated framework of several models incorporated with macroeconomic forecasts and energy supply and price assumptions (Fig. 1), assuming the continuation of existing energy policies. These assumptions were used to prepare projections based on combinations of energy demand, domestic energy supply, and increasing world oil prices. Because of possible future resource and environmental limitations on existing energy systems and because of EIA's use of historical relationships between economic growth and energy consumption, EIA did not make projections beyond the year 1990. Rather, they compared the EIA short-term and mid-term projections with long-term projections developed by other organizations. EIA's projections are in line with the range covered by these long-term projections.

The EIA report gives a historical view of the U.S. energy situation and an analysis of existing energy policy. Obviously, if these policies are changed, the results could vary widely. Thus, EIA's projections of the effect of new and emerging technologies are limited by the current governmental support for these technologies; any questions about the effects of more vigorous conservation efforts, new programs, and more support for the development of emerging technologies are not considered in this report.

References


Reviewed by
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In 1977 the National Cooperative Highway Research Program (NCHRP) compiled a synthesis (NCHRP Synthesis 43) of transportation practices entitled Energy Effects, Efficiencies, and Prospects for Various Modes of Transportation. It emphasizes an analysis of transportation energy use data, concentrating on total direct consumption and conservation potential. In addition to an original analysis of the data, the report presents summary data from recent studies. Energy efficiencies derived by the various studies are listed without criteria for evaluation or comparison of their accuracies. The synthesis contains basic national energy consumption data and includes a breakdown by sector, a disaggregation within the transportation sector by transport mode, and a chart illustrating national energy trends.

The overall design, operation, and use of several passenger and freight transport modes are examined and related to the energy efficiency of that mode. The following data are presented in Chapter 2, which deals with passenger transport modes:

1. Passenger-miles
2. Transportation services rendered
   a. Vehicle-miles per year
   b. Passenger-miles per year
   c. Average vehicle occupancy
3. Fuel consumption
   a. Gallons per year
   b. British thermal units per year with percentage of total direct transportation energy
4. Average efficiency
   a. British thermal units per passenger-mile
   b. Passenger-miles per gallon

*Data from Aerospace Corporation's Characterization of the U.S. Transportation System and the Oak Ridge National Laboratory's Transportation Conservation Data Book: Edition 2 (ORNL-5320), both published after this report, are not included.
5. Fuel cost
   a. Percentage of total operating cost
   b. Percentage of total operating cost plus travel time cost
   Some disaggregated data are presented for each mode.
   Automobile use accounts for 90% of all passenger-miles and for 97% of passenger-miles in trips less than 30 miles; therefore, it is given special attention in this study. Average miles per gallon of the new car fleets in 1970, 1974, and 1975 and projected values for the new car fleets in 1980 and 1985 are presented. These projections reflect both the driving habits of the population and anticipated technological changes in automobile manufacturing. Automobile weight, a major factor affecting mileage, can be reduced by various technological adjustments. The predicted fuel consumption values resulting from these and other changes are listed in the NCHRP synthesis. Special attention is also given to automobile fuel consumption and efficiency related to trip purpose.
   The presentation of freight transportation data (Chapter 3) is similar to that for passenger data. It includes data for various freight transport modes:
   1. Transportation services rendered
      a. Vehicle-miles per year
      b. Ton-miles per year
   2. Fuel consumption
   3. Average efficiency
      a. British thermal units per ton-mile
      b. Ton-miles per gallon
   Most of the passenger and freight transport data are derived from 1972 statistics. Truck data are given special attention; disaggregations by duty and weight class are presented.* Pipeline transportation analysis is incomplete and inaccurate because of lack of data.
   The authors of this synthesis recognized the pitfalls of a straight comparison of energy consumption data or British thermal units per passenger-mile among the different transport modes. For example, in a

   *Most waterborne statistics were taken directly from the U.S. Army Corps of Engineers, Waterborne Commerce of the United States Part 5, National Summaries, 1973.
location with only one possible means of transportation (usually the automobile), a fair comparison cannot be made with other means of transport. Direct energy consumption and energy intensity alone are not always worthwhile information. Other factors such as the time factor and the hourly monetary value of the trip should be considered. In freight transport, British thermal units per ton-mile alone can be misleading. Some important factors to be considered in this case are the distance and speed at which the commodity is to be transported; the type, size, and density of the commodity; the cost of the commodity and the cost of its transport; and the availability of various transport modes. For example, water carriers transport long-haul bulk commodities; the railroads, dense commodities in large volume; and air carriers, small priority shipments. Trucks transport almost every commodity. The fact that the percentage of empty-haul-miles is different for each freight mode affects any comparison based strictly on British thermal units per ton-mile.

Figure 1, an example of a truck round trip, illustrates some of the factors that must be considered in analyzing energy efficiency. Varying any combination of percentage of empty-haul-miles, average miles per gallon, and amount and distance of cargo being hauled affects the energy efficiency results.

The authors asserted that their primary interest was not in restating the need for energy conservation or the need for implementation of policies to achieve greater conservation. However, a presentation of conservation techniques and a means for evaluation of the conservation potential of these techniques are presented in Chapter 4. For example, by using smaller cars Americans may save 361,000 bbl of gasoline per day; a savings of 84,000 bbl/day can be accomplished through the use of bus, train, and air carriers for intercity trips. Appendix B deals exclusively with fuel conservation techniques for automobiles and includes fuel economy potential by 1980 and 1985; relations among fuel economy, safety, and emissions; the effect of engineering and manufacturing "lead times" in forestalling implementation of fuel economy measures; test procedures to measure fuel economy; and means of enforcing an improvement standard.

The authors concluded that caution should be used in comparing energy efficiencies of the various transport modes. They also pointed to the need
Fig. 1. Hypothetical example of intercity truck operations analyzed for fuel consumption. Source: Adapted from National Cooperative Research Program, 1977. Energy effects, efficiencies, and prospects for various modes of transportation. NCHRP Synthesis 43. p. 29.
for accurate data relating to the allocation of gasoline for automobile, truck, and nonhighway use and to estimates of vehicle-miles and auto occupancy values.

Reviewed by
Kenneth J. Reed
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In 1978, Oak Ridge National Laboratory (ORNL) published two reports describing the results of an investigation of gasoline use across states: *An Investigation of the Variability of Gasoline Consumption among States, ORNL-5391*, and *Econometric Analysis of the Demand for Gasoline at the State Level, ORNL/TM-6326*. Utilizing data on state gasoline sales for highway use from 1966 to 1975, the study first documented the degree of variability of usage from state to state and then attempted to explain the observed variation via an econometric analysis. The models developed in the course of the study are explanatory in nature and were not designed to be used for forecasting gasoline use.

Highway gasoline sales, whether normalized by number of households, number of drivers, or number of vehicles, varied considerably from one state to another (Fig. 1). In terms of gasoline sales per registered vehicles in 1975, Arkansas was highest with 900 gal and Pennsylvania lowest at 589 gal. Gasoline sales per registered vehicle varied less than sales per household or per licensed driver. In short, large geographic differences were found in the amounts of gasoline used by residents of different states.

A two-stage approach was employed in the econometric analysis of the factors influencing gasoline sales per household. In the first phase a national gasoline demand equation was estimated for the time series (1966-1975) of aggregate state data (Hawaii and Alaska were omitted due to lack of data on gasoline prices). Explanatory variables in this equation were vehicle ownership per household, price of regular gasoline, personal disposable income, number of drivers per household, household size, and gasoline-powered trucks as percentage of all gasoline-powered vehicles. This last variable was included in an attempt to account for nonhousehold gasoline use. Given the high percentage of gasoline trucks which are light trucks for predominantly personal transportation, this variable must be considered a very crude measure. State dummy variables were also included in the equation to account for cross-sectional effects not captured by the other variables. These state-specific coefficients, which ranged from +300 to -307 gal/year, capture the average state deviation from consumption levels
Fig. 1. 1975 gasoline consumption per vehicle. Source: An investigation of the variability of gasoline consumption among states. ORNL-5391. Oak Ridge National Laboratory, Oak Ridge, Tenn. Fig. 2, p. 7.
predicted by the national demand equation for the study period. The national demand equation contained an estimated price elasticity of -0.33 and an income elasticity of 0.31, both within the range of existing estimates.

The results of the elasticity estimates of the national demand equation merely reinforce the findings of earlier studies. The ORNL study differs from earlier analyses in that it actually begins where the others ended. In the second phase of the analysis, the calculated average state deviations from predicted consumption levels were analyzed in an attempt to establish relationships between the deviations and individual state characteristics. The "state effects," as they are called, were regressed against a set of variables describing state spatial structure, physical geography, demographic factors, economic structure, and transportation infrastructure (Fig. 2). This analysis revealed that aggregate state gasoline use decreases with increasing population density, urbanization, agricultural employment, severity of winter weather, and small-car share of the vehicle fleet. Highways gasoline use increases as percentage of the population of working age and annual tourist expenditures per capita increase.

Although ORNL's study makes no policy recommendations, the findings clearly have implications for the regional effects of national transportation energy conservation policies. These findings imply that state consumption rates result from the complex interaction of environmental, economic, and demographic factors rather than from extravagant or frivolous gasoline consumption by the residents of certain states. Thus, one may expect policies such as fuel pricing or rationing to have differing impacts on the states largely due to factors beyond their immediate control.

The ORNL study has broken some new ground in the understanding of geographical patterns of energy use; however, the work leaves several questions unanswered. For example, a better understanding of the way business use of highway gasoline (and diesel fuel as well) varies geographically is clearly needed. Also, available data on state motor vehicle fleet compositions and fuel efficiencies were insufficient to test the importance of these factors in determining fuel use. Furthermore, additional investigation of alternative model specifications (such as allowing state-specific
Fig. 2. Gasoline consumption per vehicle at the state level: a conceptual diagram. Source: An investigation of the variability of gasoline consumption among states. ORNL-5391. Oak Ridge National Laboratory, Oak Ridge, Tenn. Fig. 6, p. 20.
price and income elasticities) is needed if a predictive model capable of analyzing the regional impacts of transportation energy conservation policies is to be constructed.

Reviewed by
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SRI'S REPORT ON DIESEL CARS IN THE UNITED STATES

The SRI report *Diesel Cars in the United States*, published in August 1978, reviews existing data on the status of diesel autos in the United States and discusses prospects for energy savings through increased use of diesels. Experience with diesel cars in the United States is very recent and is limited primarily to luxury cars such as the Mercedes. Diesel sales totaled about 40,000 in 1977; the purchasers were predominantly highly affluent.

Manufacturers hope to devote a substantial fraction of production to diesel autos by 1985 in order to meet fleetwide fuel economy standards. There is, however, some doubt regarding diesels' capability of meeting legislated NOx emission standards. Evidence shows that a shift to diesels could conserve fuel; however, the savings are not as great as one might expect after reading automobile advertisements. The diesel versions of many cars do get about 50% better mileage, but this estimate does not take into account the substantially reduced horsepower of the diesel; for gas and diesel engines of comparable power, the difference in mileage drops to 25%. Furthermore, because diesel fuel contains more energy per gallon, the report points out that if one also standardizes for fuel input energy, the difference in overall energy efficiency between gas and diesel engines is only about 11%. One compensating factor is that diesel fuel requires less energy to refine; the possible refinery savings are estimated at between 1% and 10%.

Major topics discussed in the SRI report include:

1. Status of diesel cars: descriptions of currently available models, their physical characteristics, prices as compared with comparable gasoline models, sales history, and manufacturers' plans for the future.

2. Geographical distribution: available data on sales by region for Mercedes and Peugeot (SRI cautions that demand for these autos exceeds supply, and sales patterns reflect corporate allocation procedures more than intrinsic demand; hence, regression analysis is not possible.

3. Fuel availability: data on number of diesel service stations by state and on diesel and gasoline prices by city.
4. Energy savings: comparison of fuel economy for diesel and gas autos; a refinery model is used to assess savings in refining energy produced by a decrease in the gasoline/diesel output ratio.

5. Auto emissions: brief presentation of current emissions standards, implications for diesel.

   In general, the study is a concise presentation of existing information but it does not answer the crucial question, Will diesels find consumer acceptance?

References


Reviewed by
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SRI'S REPORTS ON RAILROAD PASSENGER AND FREIGHT TRANSPORTATION

SRI has produced two companion studies, Energy Study of Rail Passenger Transportation$^1$ and Energy Study of Railroad Freight Transportation$^2$. Each study consists of an executive summary volume and three analysis volumes. Overall, the two studies are very well done and represent a sound effort in dealing with a very broad but intricate problem.

Energy Study of Rail Passenger Transportation

Volume 1 of this study is the executive summary. Volume 2, Description of Operating Systems, is largely a technical discussion of existing rail passenger transportation facilities in the United States and of the measures used to describe these facilities. Definitions and descriptions of the modes to be considered are also provided. Because of difficulties in establishing baseline measures, either because of data availability or interpretation, the authors stated that the methods of assessing marginal, indirect, and joint impacts were sketchy in many places. The measures of system average intensity are British thermal units per passenger-mile and passenger-miles per gallon. The authors were thorough in developing measures of passenger service and estimates of energy use and energy intensity. The shortcomings of existing data were mentioned; however, the authors failed to identify what additional data should be collected.

Volume 2 contains a good, though brief, discussion of federal legislation that led to the National Rail Passenger Network (Amtrak). Wide variations in energy intensity across the system are noted; the estimates given lead to interesting conclusions about how to proceed with further development in terms of energy efficiency. The authors pointed out that given the same number of passenger-miles, older equipment is only about 10% less energy efficient than new equipment. However, if new equipment in the northeast rail corridor attracted significantly higher levels of patronage, substantial increases in efficiency would result.

For individual cities (regions) and existing heavy and light rail operations, facilities (track, stations, and equipment) as well as energy use are extensively analyzed. Cities included are Boston, Chicago, Cleveland, New York City and suburbs, Philadelphia, Pittsburgh, San Francisco,
and Washington, D.C. (preliminary). Fare schedules are also provided. In general, this volume is one of the better energy analyses of individual urban rail transit systems.

Volume 3, *Institutions*, briefly summarizes the institutions involved in rail passenger transportation. The somewhat superficial discussion covers the local, state, and federal agencies dealing with passenger services but does not deal with the interrelationships among those agencies. Also, from the perspective of this subject matter, energy, the study does not describe what role the respective agencies play in choosing modes in development situations.

Energy efficiency, improvements in energy efficiency, and the future of the industry are addressed in Volume 4, *Efficiency Improvements and Industry Future*. Energy demands are classified into direct, indirect, and capital energy demands. There is a good discussion of the technical methods of conserving energy, such as the use of single-end versus double-end controls on rail commuter vehicles. However, no estimates are made of how much could be saved either in specific cases or in more general situations.

**Energy Study of Railroad Freight Transportation**

Volume 1 of this study is an executive summary. Volume 2, *Industry Description*, contains a useful analysis and a good description for the novice in this field. Railroad operations such as train composition, switching and switching yards, and train control are detailed. Railroad costs are statistically analyzed. Using the Interstate Commerce Commission cost accounts and a model developed from the econometrics literature, the authors estimated that the long-run average cost tends to flatten after 500 miles of trackage; thus, efficient levels of operation are available to most Class I railroads. Costs are also estimated using the SRI model, which is labeled the "abstract railroad network." It divides rail operations into mainline rail, way train or branch delivery, switchyards and switching engines, and company costs. This approach tends to be mechanistic and therefore might overlook an item which an industry insider would consider essential to a particular operating plant.
Volume 2 outlines a potentially useful approach to low-density lines and to the abandonment of lines losing money (even on a short-run, marginal cost basis) but contributing to mainline traffic density. The authors stated, "It is possible that abandonment of low-density lines would create traffic losses for the remaining lines of such magnitude that average cost per ton-mile is not reduced or is increased." They concluded that longer trains are more efficient than shorter trains, which raises the question of how much service should be provided with more frequent, shorter trains. This analysis does not balance the effects of rising energy costs with the economic need of the rail industry to compete with other transportation modes through increased service (i.e., shorter trains and more energy consumed). A useful discussion might have included how the industry's competitive position was worsened due to higher energy costs and the tendency to use longer trains.

Volume 3, Regulation and Tariff, is particularly well written. The summary of the regulatory history is concise yet deals more than adequately with the topic. The number of government agencies involved in the modern regulation of the railroads is sizable; these agencies include the Interstate Commerce Commission and state public regulatory agencies, as well as the Federal Railway Administration, the U.S. Environmental Protection Agency, and the Occupational Safety and Health Administration. The range of regulations (i.e., the activities covered) is extensive; this volume briefly summarizes the general categories.

An example of the type of analysis presented is an informative discussion of the tapering rail tariff, general revenue increases, and regulatory exceptions (holddowns) to the general increase. Most of the holddowns occur in the long-distance ranges for specific commodities tariffs, and thus, long-distance shipment becomes increasingly subsidized by other traffic and by the shorter-haul traffic of that specific commodity. This practice, of course, distorts an efficient allocation of resources and clouds the proper locational decision by users of these commodities. One result is that more energy is consumed in the shipment, and this amount is estimated using the long-run average cost model. Also discussed are the effects of regulatory policies on cost and energy consumption and the intricate details of handling empty freight cars, including the cost of moving empty cars and the energy cost of regulations requiring the return of empty cars after use.
Volume 4 is entitled Efficiency Improvements and Industry Future. This volume indicates that the marketability of new technology is low at best, which is probably a very accurate portrayal of the current situation. According to SRI, impedances to adoption of technological advances include a capital-poor industry, low growth prospects, stringent government regulations, and a labor force which is reluctant to learn new skills without wage increases. Efficiency improvements discussed include the use of lighter equipment by eliminating the caboose and turbine locomotives; operational changes, such as reduction of empty-car mileage and reduction of routing circuitry; and equipment efficiency developments, such as flywheels and alternative fuels. The potential of each of these improvements, which appear as a shopping list, is evaluated, and the evaluations generally appear to be accurate. Intermodal cooperation and modal shifts to rail from more energy-intensive forms of transportation will produce additional savings in fuel consumption. At the center of this argument, however, is the issue of railroad service. Service is notoriously poor on some lines, and, as a first step, it must be improved before any of these potential savings will be realized.

Volume 4 concludes with recommendations. New hardware technology is at the top of the list; however, the chances of widespread development and adoption seem so poor that funding in this area may not prove to be cost-effective. Improvement in operations and intermodal systems analysis seem to be more likely. The final recommendation is for a relaxation of some regulatory policies; the mood in Washington seems favorable, and additional research in this area may hasten the relaxation process.

References


Reviewed by
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TECNET TRANSPORTATION ENERGY USE MODEL

TECNET is a comprehensive transportation forecasting model based on an interindustry input-output model of the economy. Designed to explore the consequences of policy options, TECNET accepts a wide range of transportation-related parameters as input and produces a detailed analysis of the energy consequences of those parameters, featuring breakdowns by mode and urban or rural area. This study uses the TECNET model to explore ten possible future energy scenarios.

The importance of TECNET lies in its explicit accounting of indirect energy use in transportation. For example, the model can be used to determine how much energy is consumed in building and maintaining vehicles and facilities and in refining and distributing fuels. The input-output module of TECNET (based on INFORUM) permits the tracing of each industry's ultimate energy contribution to each transportation mode. In 1977, total transportation energy use was 1.42 times greater than direct or operating energy use.

Most important transportation variables of TECNET—mode split, load factor, and vehicle-miles traveled (VMT) per gross national product (GNP)—are exogenously specified and independent. This characteristic may be viewed as a severe shortcoming by the proponents of simulation models but as refreshing humility by their critics. In any case, a heavy burden is placed on the TECNET user, who must make his own assumptions about how these variables interact and their future values. In the hands of a knowledgeable analyst, the ability to specify so many major parameters can be a major advantage; however, unreasonable results can be easily generated if the user is not very careful. For example, in analyzing a gas rationing scenario the assumption is made that there is a simple proportional relationship between passenger-miles traveled (PMT) and gasoline consumption (i.e., a 25% decrease in gasoline supply causes a 25% decrease in PMT because auto load factor is assumed to stay constant). Or, as another example, the simple use of the model produces a result in which PMT is dependent on GNP only and is independent of the price of travel.

The base case assumes fleetwide auto mileage of 27.5 mpg by 1985 with no further improvement and continued reliance on internal combustion
engines, increased bus and rail share, slight decreases in energy intensity for all modes, and continuing urbanization. The result is that total energy use (direct and indirect) grows slowly at first, 1.4% annually, as small cars increase their share of the market. After 1985, however, a constant miles-per-gallon value is assumed through the year 2000, giving a 2.2% annual growth of all transportation energy.

The high-conservation scenario differs from the base case in two important respects: (1) industrial adherence to the National Energy Plan, including increased conservation measures and a shift to coal and (2) domination of the auto fleet by nonconventional engines — Brayton, Stirling, and electric. The result is 25% less energy use than in the base case by the year 2000. To isolate the contribution of the alternative engines, an internal combustion engine (ICE) case was run. The ICE scenario is identical to the high-conservation scenario except for its assumption of a 100% ICE auto fleet. This substitution results in 26% higher direct-energy consumption by automobiles than in the high-conservation case, but overall energy use increases by only 3%.

In a further exploration of the merits of non-ICE engines, separate scenarios were run for the Stirling and Brayton engines. These scenarios share economic and industrial assumptions with the base case, but they assume 100% market penetration of the respective engine types by 2000. Comparison of the two scenarios illustrates TECNET's strong points. Both engines conserve operating energy, but lower weight and smaller reliance on aluminum by the Brayton give it an advantage in indirect energy. In addition, the Brayton scenario indicates substantially less pollution.

A number of sensitivity analyses, all variations of the base case, can be performed. The constant modal share holds modal shares constant but reflects continuing urbanization. The constant urban share holds the urban proportion of the population constant and varies modal share.

The shift scenario is of particular interest because it illustrates the importance of considering indirect energy use. This scenario postulates a 10% decline in urban auto share (to the benefit of rail and bus transit) and 10% declines in auto and air shares of nonurban traffic; these shifts are to occur in the first quarter of the next century. The result is an energy bill higher than in the more auto-oriented base case.
because indirect energy requirements per passenger-mile are one-third less for auto than for rail or air. This analysis is somewhat marred by a failure to distinguish between local rural travel and intercity travel; therefore, the model has increased urbanization resulting in decreased air PMT.

The rationing scenario explores the implications of a 25% reduction in gasoline sales to consumers during 1978. Not surprisingly, the economy registers a shift in expenditures from travel to luxuries. Even more surprising is the result, or assumption, that bus, rail, and air PMT will not increase and the counterfactual result that auto PMT falls by 25%.

Finally, the constant scenario, or "if this goes on" scenario, leaves modal shares and energy intensity values unchanged from current levels. Energy consumption in 2000 is 32% higher than in the base case.

These results must be interpreted with caution. TECNET is grandiose in scope. The values of most of the principal variables are not accurately ascertainable today, much less 25 or 50 years in the future. The lack of interaction among these variables is a serious flaw, and there is little explicit treatment of supply-and-demand forces. Nevertheless, TECNET appears to be a potentially useful tool for exploring policy options, especially in the short term.

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Reviewed by
Charles Lave and Kenneth Chomitz
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TRW'S STUDY OF INCREASED DIESEL CAR PRODUCTION

In view of the significant increase in diesel car production in the last two years, TRW has carried out a study\(^1\) for the Office of Policy and Evaluation, U.S. Department of Energy, to examine the following three assumed levels of penetration of diesel cars into the new-car market:

1. Continued negligible penetration
2. Progressive penetration to 65% of new-car sales in 1995, at different growth rates:
   a. Linear at 3% increase per year
   b. Exponentially starting from 0.1% of new-car sales in 1977
3. Rapid penetration to 100% of new cars in 1982

Under each set of assumptions, the study estimates the increase in demand for diesel fuel (for automobiles), the resulting implications for refinery operations, and the potential petroleum savings.

As part of the TRW report, existing studies were reviewed. A useful index for measuring the change in the motor fuel mix is the gasoline-to-distillate ratio (G/D) whose current value is approximately 1.6. The findings of several relevant studies are summarized below in terms of this index.

1. Refinery operations
   a. Exxon study: A new refinery in 1990-2000 could achieve as much diesel as gasoline output (G/D = 1.0).
   b. Amoco and Mobil studies: The limit to refinery flexibility would be reached at G/D ratios of 0.6 to 0.7. A larger proportion of diesel (i.e., a lower ratio), if economical, would involve shifts in other product demands or new refining technology.

2. Diesel penetration
   a. Amoco and Mobil studies: If the increased distillate production is all used in diesel cars, a G/D ratio of 0.7 amounts to total motor fuel production consisting of 30% diesel, which is sufficient to sustain 40% of the total U.S. automobile fleet. A reasonable time frame is considered to be 1985 or beyond.
   b. Banner and Moore Associates study: Approximately 60% of the new-car fleet and 50% of the total car fleet in 1995 can be diesels,
with total motor fuel production including approximately 60% diesel fuels.

3. Petroleum savings
   a. Mobil and Banner and Moore Associates studies: A maximum petroleum savings of 5% would be achieved when diesel comprises 40% of the total motor fuel output.

   Starting from these findings and building on an extensive in-house analysis of baseline transportation demand, the TRW study concludes that, in the near term, sufficient diesel output from refineries is feasible to meet demands even if the number of diesel cars increases rapidly:
   1. High rate of penetration of diesels (all new cars in 1982 and beyond being diesels) would require major changes in refining operations by 1983-84, necessitating major planning by 1979 or 1980.
   2. Intermediate penetration (3% linear increase in 1976 to 65% of new-car sales in 1995) would necessitate the attainment of a G/D ratio of 0.7 in 1985 and 0.6 in 1988.
   3. Intermediate penetration starting at a low rate (0.1% exponential growth to 65% of new-car sales in 1995) would delay the need for a G/D ratio of 0.7 to 1995, and the limit of 0.6 would not be needed until 2000.

   Thus, it appears that in all cases sufficient lead time would be available for refineries to accommodate the demand shifts resulting from significant increases in diesel car sales.

   In contrast to these hypothesized situations, U.S. automobile manufacturers were found to anticipate a very slow growth of the diesel car population, with imported diesels expected to comprise less than 5% of the total import fleet by 1985. A potential barrier to rapid penetration of diesel cars is emission control. These control measures include the NO\textsubscript{2} standard of 0.4 gpm, if enforced (diesels meet the current NO\textsubscript{2} standard of 2.0 gpm), and particulate standards which would probably be introduced if the diesel car population were increased substantially.

The resulting petroleum savings from increased reliance on diesel cars would be small at first, with long-run savings dependent on the overall fuel economy of new diesels compared with conventional cars on the
road now. The study does not analyze projections of diesel fuel economy except to point out that increased fuel economy over the present level would serve to counteract any barriers to high diesel penetration.

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THE WHARTON EFA AUTOMOBILE DEMAND MODEL

The Wharton EFA Automobile Demand Model\(^1\) is probably the most sophisticated model for forecasting long-run automobile demand currently in operation. The model, completed in 1977 for the Department of Transportation, Transportation Systems Center, is distinguished by its attention to detail in its extensive data base and its competent and sometimes innovative econometrics. The authors described their model as providing "long-run policy analysis and forecasting of annual trends for U.S. auto stock, new sales, and their composition by size class."\(^1\) The basic model structure is that of lagged adjustment to "desired" levels of vehicle stock and composition which change in response to changing income, relative prices, and other factors.

With regard to their extensive data base, the authors stated, "It is our belief that the scope and magnitude of this data base is such that its potential usefulness rivals that of the model itself. For instance, we compiled 57 items of information for 2234 domestic cars (1947 to 1974) and 20 items for 982 foreign (1948 to 1975). In addition to this model specific data we compiled aggregate data on new registration and cars in operation, by state for 1969 through 1972, and for the United States for 1948 to 1974."\(^1\) The potential of this extensive resource of automobile data is yet to be tapped by other researchers.

One unique data item constructed by Wharton for this model is a measure of total vehicle operating cost per mile. This measure includes the total stream of costs incurred over the vehicle's lifetime (both of purchase and operation) discounted to present value. This value is, in fact, the total cost of the vehicle to all its owners. Although it is debatable whether consumers actually take all these factors into account in purchase decisions, the variable was found to be a critical one in determining both desired stock and its desired composition by size class in the Wharton equations. The cost per mile includes transportation charges and taxes and new car prices including options, as well as expenditures on fuel, maintenance, and repairs. Unfortunately, it also requires critical assumptions about future miles traveled and discount rates.
The basic structure of the Wharton model is illustrated in Fig. 1. At its heart are modules which predict the total demand for automobile stock and the composition of new car sales by size class. The demand for stock model is an updated version of the familiar stock adjustment model introduced in the 1950s by Chow and Nerlove. The key innovation in the Wharton model is the adaptation of the stock adjustment approach to the modelling of new car sales by size class. First, an equation was developed to forecast the "desired" size class composition of the vehicle fleet as a function of household size, income, the relative capitalized operating costs of the vehicles, public transit use, population age structure, metropolitan population, and regional dummy variables. Unlike typical stock adjustment models in which the "desired" demand equation is never...
directly estimated, the authors chose to directly estimate a shares equation by making the heroic assumption that the size class composition of sales from 1972 to 1973 across states represented a long-run equilibrium size class distribution for the entire fleet. This is indeed a heroic assumption because it essentially requires that the existing size class shares in each state match the size class shares of new car sales. This assumption was not tested due to unavailability of data, but it is crucial to the correct application of the stock share adjustment approach. The Wharton model is the first of the several market shares demand models in existence to recognize that the existing distribution of motor vehicles can be adjusted only gradually to conform to changing consumer desires. The actual sales of vehicles by size class are expressed as a function of the gap between the desired and actual shares. This innovation is important because it is probably far easier to adjust the number of vehicles in the fleet than to adjust its composition over a short time.

Another distinctive aspect of the Wharton model is the way in which it estimates fuel efficiencies for vehicle classes. Rather than simply using a sales-weighted average calculated from data for a given year or years and then assumed to hold constant over time, the Wharton model estimates class-miles per gallon as a function of class-average inertial weight, engine displacement, transmission type, and fraction of the class with four or six cylinders. This approach allows the model to forecast future class-average miles per gallon, taking account of future changes in vehicle characteristics. These changes must be specified on the basis of the modeler's judgement. The model cannot directly consider the impact of new technologies. A tricky question which is not addressed is the stability of class market share relationships in the future as class characteristics change.

The Wharton model also contains equations for estimating annual vehicle-miles traveled (VMT) per family unit as a function of the age distribution of the vehicle stock (similar to the Sweeney model), real gasoline cost per mile, real income, and the percentage of family units earning more than $15,000 per year. The role of this VMT-estimating equation in the model is to predict total travel as an input to the demand for stock and scrappage. In conjunction with assumptions about the relative utilization of cars across size classes, however, the VMT estimate could
conceivably be combined with mileage estimates to forecast the demand for gasoline. This prediction was not made, and one senses it is largely because of dissatisfaction with the quality of the VMT data and the lack of data on VMT by car class. Finally, the model also contains subsidiary equations for analyzing the used car market in terms of total transactions and prices by class and vintage.

Though the Wharton model makes numerous assumptions, some of which are debatable, its complex specification and estimation, the breadth and depth of factors it considers, and the extensiveness of its data base cannot be matched by competing models. The Wharton model is the Cadillac of automobile-demand forecasting models.

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Pennsylvania University of, Dept. of Economics, Economics Research Branch
ADDRESS: Philadelphia, PA 19104
TITLE: Demand Elasticities for Gasoline: Another View

1974, June 15

KEYWORDS: ELASTICITY (ECONOMICS); GASOLINE; ENERGY DEMAND; PRICE; MATHEMATICAL MODELS; ENERGY CONSERVATION; VEHICLES; SEDAN; ECONOMICS; WEIGHT: SIZE; TIME SERIES ANALYSIS

<5>
Adams, G.H.
National Technical Information Service
ADDRESS: 5285 Port Royal Road, Springfield, VA 22161
TITLE: Dual Mode Transportation (A Bibliography with Abstracts)

1977, June

KEYWORDS: BIBLIOGRAPHIES; TRANSPORTATION; SOCIO-ECONOMIC FACTORS; URBAN TRANSPORTATION; RAIL TRANSPORTATION; RAIL TRANSPORTATION SYSTEMS; PASSENGER TRANSPORTATION; BUSES (VEHICLES); COSTS: REGIONAL PLANNING; ABSTRACTS: PERSONAL RAPID TRANSIT; COMMUNICATIONS: DIAL-A-RIDE; CARGO TRANSPORTATION; TRANSPORTATION SYSTEMS

AVAILABILITY: NTS

<6>
Adams, G.R.
National Technical Information Service
ADDRESS: 5285 Port Royal Road, Springfield, VA 22161
TITLE: Tourism and Vacation Travel: State and Local Government Planning (A Bibliography with Abstracts)

1977, August

KEYWORDS: TRAVEL: SOCIO-ECONOMIC FACTORS: TOURISM: ECONOMIC DEVELOPMENT: RECREATION: STATE GOVERNMENT; LOCAL GOVERNMENT; PLANNING; LAND USE

AVAILABILITY: NTS

<7>
Adams, G.H. (ed.)
National Technical Information Service
ADDRESS: 5285 Port Royal Road, Springfield, VA 22161

1977, October

KEYWORDS: BIBLIOGRAPHIES; BUSES (VEHICLES); RESEARCH; SAFETY; MAINTENANCE; ENGINES; PROPULSION; TRAVEL; ECONOMICS; SCHEDULING; COSTS; SUBSIDIES; ENGINEERING; HIGHWAYS; MODELS; TRAFFIC: CONFERENCE: PLANNING; MARKETING; AIR POLLUTION; RATES (COSTS); FORECASTING; SIMULATION: ABSTRACTS

AVAILABILITY: NTS

<8>
Aerospace Corp., Energy and Transportation Division, Transportation Group Directorate
ADDRESS: El Segundo, CA
TITLE: Mode Shift Strategies to Effect Energy Savings in Intercity Transportation

Final Report, V.P.
1977, April

SPOKESMAN: Federal Energy Administration
Tables (Data); Passenger Transportation; Energy Consumption; Financial Data; Safety
Intercity Transportation; Revenue; Annual Competition

American Gas Association, Financial and Administrative Section, Library Services Committee
Address: 1515 Wilson Boulevard, Arlington, VA 22209
Title: Production and Use of Methanol (A Bibliography 1960-1977)
22 p.
1977, August
Keywords: Methanol; Alternate Fuels; Utilization; Production; Bibliographies; Gasoline; Automobiles
Availability: Library, Northern Natural Gas Company, 2425 Dodge Street, Omaha, NE 68102

American Nuclear Society Inc.
Address: 555 N. Carolina Ave., La Grange Park, IL 60525
Title: Proceedings of the 12th International Energy Conversion Engineering Conference, Volume 1 and 2
Proceedings of a conference held in Washington, DC, August 20-22, 1977
1977
Keywords: Fuel Economy; Gas Turbine Engines; Automotive Engines; US EPA; Alternate Fuels; Reactor Cycle; Electric Vehicles; Batteries; Energy Conservation; Equipment; Environmental Impact; Industrial Sector; Unconventional Energy Sources; Experimental Thermodynamics; Steam Cycle Engines; Stirling Engines; Thermodynamics; Energy Conversion; Design; Waste Heat; Industries; Electric Power; Solar Collectors; Solar Energy; Photovoltaics Cells; Photovoltaic Conversion; Thermal Energy Storage Equipment; Insulation; Wind Power; Diaries; Models; Nuclear Power

American Public Transit Association
Address: 1700 17th Street NW, Suite 2100, Washington, DC 20006
Title: Transit Fact Book, 1977-78 Edition
1978, May
Keywords: Transportation; Statistics; Mass Transportation; Buses (Vehicles); Passenger Transportation; Automobiles; Rail Transportation; Revenue; Fuel Consumption; Tables (Data)

American Trucking Associations Inc., Dept. of Transportation
Address: 1676 P Street NW, Washington, DC 20036
Title: Monthly Truck Tonnage Report
Monthly report, approximately 2 p.
Keywords: Trucks; Cargo Transportation; Tables (Data); Intercity Transportation; Regional Analysis; Comparative Evaluations
<33> CONTRIBUTORS:  
VINCENTS; RAPID TRANSIT SYSTEMS; ECONOMICS; 
PUBLIC TRANSPORTATION; COMPETITIVE 
EVALUATIONS; BEHAVIOR; TABLES (DATA); GRAPHS 
(CHARTS)

<33> R. A. R. | Golec, T. 
Chrysler Corp.  
ADDRESS: Detroit, MI 
TITLE: Upgrading Automotive Gas Turbine 
Technology: An Experimental Evaluation of 
Improvement Concepts 
PAPER No. 760200, presented at the Society of 
Automotive Engineers Congress and Exposition, 
1976 
SPONSOR: Society of Automotive Engineers 
KEYWORDS: GAS TURBINE, AUTOMOBILE; GAS TURBINE 
ENGINE; DIAGNOSIS; GRAPHS (CHARTS); 
PERFORMANCE; TESTING; AUTOMOTIVE EMISSION 
CONTROL; GAS ECONOMY; PHOTOGRAPH

AVAILABILITY: Society of Automotive Engineers, 
400 Commonwealth Drive, Warrendale, PA 15096

<35> Argonne National Laboratory  
ADDRESS: 9700 South Cass Avenue, Argonne, IL 
60439 
TITLE: Development of Lithium/Metal Sulfide 
Batteries at Argonne National Laboratory: 
Current Status and Future Plans 
REPORT No. AM-77-18, 34 p. 
1977, March 
SPONSOR: Energy Research and Development 
Administration, Division of Transportation 
Energy Conservation 
KEYWORDS: LITHIUM/METAL SULFIDE BATTERIES; ENERGY 
STORAGE; MATERIALS; ELECTRODES; ELECTRIC 
VEHICLES; ELECTRIC POWER; LIQUID-LITHIUM/METAL 
SULFIDE BATTERIES; DIAGNOSIS 
AVAILABILITY: NTIS

<36> Argonne National Laboratory  
ADDRESS: 9700 South Cass Avenue, Argonne, IL 
60439 
TITLE: High-Performance Batteries for Stationary 
Energy Storage and Electric-Vehicle 
Propulsion: Progress Reports 
Quarterly 
SPONSOR: Energy Research and Development 
Administration, U.S. Dept. of Energy 
KEYWORDS: ENERGY STORAGE; ELECTRIC VEHICLES; 
ENERGY CONSERVATION; COMMERCIALIZATION; 
TESTING; MATERIALS; UTILIZATION 
AVAILABILITY: NTIS

<37> J. R. | Kraft, J. (ed.)  
Federal Energy Administration, National Impact 
Division; Federal Energy Administration, 
Office of Macroeconomic Impact Analysis  
ADDRESS: Washington, DC 20585 
TITLE: Economic Dimensions of Energy Demand 
and Supply 
127 p. 
1976
EMISSIONS: AUTOMOBILES; COSTS: AUTOMOBILE
ENGINEERING; EMPLOYEES: FUEL CONSUMPTION;
AUTOMOBILE MACHINERY; COMPARATIVE EVALUATIONS;
PRICES: DRIVING CYCLES; EMPLOYMENT: OWNERSHIP;
PETROLEUM INDUSTRY; MANUFACTURING: TANKER
(BATV); MODELS: DESIGNS: POLLUTION REGULATIONS
AVAILABILITY: NTS

BADER, C. J.; Plaut, H.G.
BADER (Leo) ASSOCIATES
ADDRESS: Redwood City, CA 94063
TITLE: Electric Propulsion for Road Vehicles.
State of the Art and Problems
Report No. N76-214379, USAF TP-16945, 27 p.;
translated from Electrotechnische Zeitschrift und
Archiv A. 94 (11), 637-645
1975, December
KEYWORDS: ELECTRIC VEHICLES; BATTERIES; HYBRID
ELECTRIC-POWERED VEHICLES: PROPULSION: COSTS
AVAILABILITY: NTIS

BADER, C. J.; Stephen, J.
Deutsche Automobilgesellschaft
Forchungslaboratorium
ADDRESS: Germany
TITLE: Electric Vehicles in Germany - Present and
Future
Paper No. 780087, presented at the Society of
Automotive Engineers' Congress and
Exposition, Cobo Hall, Detroit, Michigan,
1978
KEYWORDS: ELECTRIC VEHICLES; GERMAN FEDERAL
REPUBLIC: ENERGY STORAGE: DRIVE TRAIN
SYSTEM: PRICES: MAINTENANCE: HYBRID
ELECTRIC-POWERED VEHICLES: PHOTOGRAPHS;
DIAGRAMS
AVAILABILITY: Society of Automotive Engineers
Inc., 400 Commonwealth Drive, Warrendale, PA
15086 $2.50

BADENSCHMIDT, W.; Jenkins, G.
THE Inc., Energy Systems Planning Division
ADDRESS: Oilen, PA 17248
TITLE: Automotive Fuel Requirements with
Increasing Diesel Car Population and
Implications to Refining Operations
1978, January
SPONSOR: U.S. Dept. of Energy, Office of Policy
and Evaluation
KEYWORDS: DIESEL ENGINES: AUTOMOTIVE FIELDS;
PETROLEUM REFINING: FORECASTING: GRAPHICS;
DIESEL FUELS: GRAPHS (CHARTS): PETROLUER
REFINING: DISTRIBUTION: SUPPLIES (ECONOMICS):
DEMAND (ECONOMICS)

BAYES, E.
Florida State University
ADDRESS: Tallahassee, FL 32306
TITLE: Transportation Issues in Consumer
Motivation
Paper presented at the 52nd Annual Meeting of the
Highway Research Board, published in Highway
Research Record No. 419, 1-9
1973
**<500 COPY.**

**SPONSOR:** National Academy of Sciences, National Research Council, Highway Research Board

**KEYWORDS:** COMMERCE; TRANSPORTATION; ATTITUDES; HELP; METHOD; TABLES (DATA); QUESTIONNAIRES; MASS TRANSPORTATION

**AVAILABILITY:** National Academy of Sciences, Transportation Research Board, 2011 Constitution Ave., N.W., Washington, DC 20418

**$2.00 for Highway Research Record No. 339**

**<550 SPONSOR:** National Science Foundation

**KEYWORDS:** FIAT; JAPAN; ITALY; REPUBLICAN; MOROCCO; SWEDEN; UNITED KINGDOM; UNITED STATES; EUROPE; MODELS; INTERNATIONAL ANALYSIS; ENERGY SUPPLIES; ENERGY DEMAND; FORECASTING; ENERGY BALANCE; GENOT; CONSUMPTION; PRICES; GROWTH; TRANSPORTATION; RESIDENTIAL SECTOR; COMMERCIAL SECTOR; INDUSTRIAL SECTOR; EXPORTS; IMPORTS; REPORTS; GROSS NATIONAL PRODUCT; CANADA; DENMARK; FINLAND; FRANCE; GIBRALTAR

**AVAILABILITY:** MIT Press, Cambridge, MA 02139

**$30.00**

**<555 SPONSOR:** D.O. Dept. of Transportation, National Highway Traffic Safety Administration

**KEYWORDS:** IMPACT OF DIAGNOSTIC INSPECTION ON AUTOMOTIVE FUEL ECONOMY AND EMISSIONS

**AVAILABILITY:** D.O.

**<560 SPONSOR:** Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15086

**AVAILABILITY:** P.O.

**<565 SPONSOR:** Department of Transportation, National Highway Traffic Safety Administration

**AVAILABILITY:** D.O.

**<570 SPONSOR:** Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15086

**AVAILABILITY:** P.O.

**<575 SPONSOR:** Department of Energy, Bettis Atomic Power Laboratory

**AVAILABILITY:** D.O.

**<580 SPONSOR:** Siemens Institute of Technology, Workshop on Alternative Energy Strategies (WAS)

**AVAILABILITY:** P.O.

**<585 SPONSOR:** Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15086

**AVAILABILITY:** P.O.

**<590 SPONSOR:** Department of Energy, Bettis Atomic Power Laboratory

**AVAILABILITY:** D.O.

**<595 SPONSOR:** Siemens Institute of Technology, Workshop on Alternative Energy Strategies (WAS)

**AVAILABILITY:** P.O.

**<600 SPONSOR:** Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15086

**AVAILABILITY:** P.O.
Bigelow, C.O. and associates

**Title:** Integrated Economic-Social-Environmental Planning

Paper presented at the 54th Annual Meeting of the Transportation Research Board, published in Transportation Research Record 565, 25-32

**Sponsor:** National Academy of Sciences, Transportation Research Board

**Keywords:** SOCIO-ECONOMIC FACTORS; ENVIRONMENTAL IMPACT; TRANSPORTATION SYSTEMS PLANNING; GOVERNMENT POLICIES; LAND USE; CITIZENS GROUPS

**Availability:** National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave., N.W., Washington, DC 20418

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Birns, R.W. and Yah, J.W.

**Title:** Transportation-Related Data Bases Extracted from the National Index of Energy and Environmental Data Bases. Part I: Digest of Detailed Data Base Descriptions, Part II: Detailed Data Base Descriptions


**Sponsor:** Energy Research and Development Administration, U.S. Dept. of Transportation, Transportation Systems Center, Information Division

**Keywords:** TRANSPORTATION; DATA BASE; ABSTRACTS

**Availability:** RTIS

---

Bissette, C.A.

**Title:** A Preliminary Assessment of Empty Miles Traveled by Selected Regulated Motor Carriers


**Sponsor:** Interstate Commerce Commission

**Keywords:** CARGO TRANSPORTATION; PHYSICAL PRODUCTS; FUEL CONSUMPTION; TRUCKS; HOUSEHOLD

---

Bernard, R.J. and Lavelle, J.J.

**Title:** Design of Elevated Overpass Structures for Light Rail Transit (Abstract) (Discussion)

Paper published in Transportation Research Record 627, 17-21 (Discussion p. 20)

**Sponsor:** National Academy of Sciences, Transportation Research Board

**Keywords:** RAPID PUBLIC SYSTEMS; DESIGN; INTER-OP-WAY; PERFORMANCE; ELEVATE GUIDEWAYS

**Availability:** National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave., N.W., Washington, DC 20418

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Berkel, M.J. and Lavelle, J.J.

**Title:** Transportation Energy Scenario Analysis Technical Report No. 1: Examination of Four Existing Scenarios


**Sponsor:** U.S. Dept. of Energy, Transportation Energy Conservation Division, Data Analysis Branch

**Keywords:** POPULATION; TRANSPORTATION SYSTEMS; LIFE STYLES; ELECTRIC VEHICLES; MODAL; SOCI-ECONOMIC FACTORS; URBAN TECHNOLOGY; POPULATION GROWTH; ENERGY SOURCES; ECONOMIC ANALYSIS; AUTOMOBILES; ENERGY CONSUMPTION; TRAFFIC CHARACTERISTICS; TRAVELERS' ENERGY CONSUMPTION; GOVERNMENT POLICIES; TRANSPORTATION

**Availability:** RTIS

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Brache, R. (Chairman)

**Title:** Proceedings: International Symposium on Alcohol Fuel Technology - Ethanol and Ethanol Fuels


**Sponsor:** German Federal Ministry for Research and Technology (BMFT)

**Keywords:** ALCOHOL FUELS; ETHANOL; METHANOL; AUTOMOTIVE ENGINES; PRODUCTION; ECONOMIC ANALYSIS; COMPARATIVE EVALUATIONS; POLICY; MARKET FUELS; USES; TECHNICAL ASSESSMENT; INTERNAL COMBUSTION ENGINES; MARKET; GRAINS (CHARTS)

**Availability:** RTIS

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### Additional Entries

... (more entries related to transportation research and conference proceedings)
<72> COST: GOOD: TABLES (DATA)

Argonne National Laboratory; Oak Ridge National Laboratory; University of California, Berkeley
ADDRESS: Oak Ridge National Laboratory; University of California, Berkeley; University of California, Berkeley
TITLE: An Evaluation of Alternative Power Sources for Low-Emission Automobiles
Paper No. 750929, presented at the Society of Automotive Engineers' automobile engineering meeting, Detroit, Michigan, October 13-17, 1975
PAGES: 18
SPONSOR: Societies of Automotive Engineers
KEYWORDS: AUTOMOTIVE ENGINES; ENGINE; ALTERNATIVE FUELS; DIESEL ENGINES; FUEL ECONOMY; ESTIMATING ENGINEERS; ELECTRIC VEHICLES; GRAPHS (CHARTS); COSTS; COMPARATIVE EVALUATIONS
AVAILABILITY: Society of Automotive Engineers

<75> Buckbait, J.B.; Niel, S.J.
Chrysler Corp.
ADDRESS: Detroit, MI
TITLE: The 1975 Chrysler Toronado Convertible Lock-Up Clutch
Paper No. 750100, presented at the Society of Automotive Engineers' Congress and Exposition, Detroit, Michigan, February 27 - March 1, 1975, 9 pages
SPONSOR: Societies of Automotive Engineers
KEYWORDS: AUTOMOTIVE ENGINEERS; FUEL ECONOMY; TRANSMISSION; DESIGN; PHOTOGRAPHS
AVAILABILITY: Society of Automotive Engineers

<79> Hohes, J.S.: Cool, C.L.: Donlap, J.K.
Hohes Publishing Co., Research Dept.
ADDRESS: 2801 Arneal Boulevard, Redondo Beach, CA 90278
TITLE: Report on the Aspects of Automotive Fleet Operations on Transportation Energy Conservation
Report No. 0922-3987/1974/1/1, 4 pages
SPONSOR: Energy Research and Development Administration
KEYWORDS: AUTOMOTIVE FLEETS; LEASED TRUCKS; LEASED VEHICLES; FUEL ECONOMY; OPERATING COSTS; MAINTENANCE; REPAIRS; ELECTRIC VEHICLES; INSURANCE; TAXES; AUTOMOBILES; MAIL AND CIRCULATION; FUEL ECONOMY; TABLES (DATA); VEHICLE OPERATIONS

<76> Vidas, R.R.
"A. B. Sc., Dept. of Agriculture, Economic Research Service, National Economic Analysis Division
ADDRESS: Washington, DC 20250
TITLE: Cost of Operating Refrigerated Trucks for Handling Fresh Fruits and Vegetables
SPONSOR: Cost of Operating Refrigerated Trucks for Handling Fresh Fruits and Vegetables
KEYWORDS: CARGO TRANSPORTATION; RATES (COSTS); COSTS; TRANSPORTATION; FRUITS; CALIFORNIA; FLORETTO; TEXAS; TABLES (DATA); VEGETABLES; COSTS
AVAILABILITY: PB-270625

<77> Boll, D.L.; Johnson, N.R.; Callen, N.
Michigan Technological University
ADDRESS: Houghton, MI
TITLE: Investigation of the Feasibility of a Dual Mode Electric Transportation System
Report No. ESL-6201, 1977
SPONSOR: Energy Research and Development Administration, Division of Transportation Energy Conservation
KEYWORDS: ENERGY CONSERVATION; TRANSPORTATION SYSTEMS; ELECTRIC VEHICLES; ENERGY STORAGE; DUAL MODE ELECTRIC TRANSPORTATION SYSTEM; TABLES (DATA); DESIGN; MAINTENANCE; FUELS; COSTS; ALTERNATIVE FUELS; COMPARATIVE EVALUATIONS; SAFETY
AVAILABILITY: PB-270625

<78> Boll, J.G.; Re, L.B.; Wenzel, R.B.
University of California, Berkeley
ADDRESS: University of California, Berkeley, CA
TITLE: Test of the Performance and Characterization of a Prototype Inductive Power Coupling for Electric Highway System
SPONSOR: Electric Highway System
KEYWORDS: PERFORMANCE; TESTING; DESIGN; ELECTRIC VEHICLES; DRIVING CYCLE; BATTERIES; ELECTRIC HIGHWAY SYSTEMS; COUPLING; BATTERIES
AVAILABILITY: PB-270625
82

<88>
COST.
TITLE: The Aerodynamic Friction and Motor-Drive Line Efficiency of Electric Vehicles from Track Tests


SPONSOR: National Aeronautics and Space Administration, Lewis Research Center

KEYWORDS: ELECTRIC VEHICLES; TESTING; TIMES: ROAD TESTS; WIND; FRICTION; BATTERIES; VELOCITY; TABLES (DATA); EFFICIENCY

AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096 $2.50

89

<89>
Bromander, J.; Curtis, R.; Fox, H.: Hamilton, W.
General Research Corp.
ADDRESS: P.O. Box 1951, Santa Barbara, Calif. 93105
TITLE: Electric and Hybrid Vehicle Performance and Design Goal Determination Study

SPONSOR: Energy Research and Development Administration, Division of Transportation Energy Conservation

KEYWORDS: ELECTRIC VEHICLES: HYBRID ELECTRIC-POWERED VEHICLES; PERFORMANCE; FUEL CONSUMPTION; LEAD-ACID BATTERIES; ENERGY STORAGE: URBAN TRANSPORTATION; PASSENGER TRANSPORTATION; BUSES (VEHICLES); FUEL ECONOMY; OPERATING COSTS; GRAPHS (CHARTS); MODELS; STANDARDS; DESIGN

90

<90>
BRI Systems Inc.
ADDRESS: Phoenix, Ariz. 85068
TITLE: Fuel Economy Through Teamwork: The Science of Saving Fuel

Energy Savings in School Transportation Publication Series No. 5, 7 p.

1977, October 7

SPONSOR: U.S. Dept. of Transportation

KEYWORDS: FUEL ECONOMY; BUSES (VEHICLES); DESIGN

AVAILABILITY: U.S. Dept. of Energy, Voluntary Truck and Bus Fuel Economy Program, Washington, DC 20061

91

<91>
BRI Systems Inc.
ADDRESS: Phoenix, Ariz. 85068
TITLE: Fuel Economy Through Teamwork: Operating for Fuel Economy

Energy Savings in School Transportation Publication Series No. 6, 7 p.

1977, October 7

SPONSOR: U.S. Dept. of Transportation

KEYWORDS: FUEL ECONOMY; OPERATING COSTS; PLANNING

AVAILABILITY: U.S. Dept. of Energy, Voluntary Truck and Bus Fuel Economy Program, Washington, DC 20061

92

<92>
BRI Systems Inc.
ADDRESS: Phoenix, Ariz. 85068
TITLE: Fuel Economy Through Teamwork: Driving for Fuel Economy


1977, October 7

SPONSOR: U.S. Dept. of Transportation

KEYWORDS: FUEL ECONOMY; MILEAGE; BUSES (VEHICLES); PUBLIC RELATIONS

AVAILABILITY: U.S. Dept. of Energy, Voluntary Truck and Bus Fuel Economy Program, Washington, DC 20061

93

<93>
BRI Systems Inc.
ADDRESS: Phoenix, Ariz. 85068
TITLE: Fuel Economy Through Teamwork: Purchasing for Fuel Economy


1977, October 7

SPONSOR: U.S. Dept. of Transportation

KEYWORDS: PASSENGER TRANSPORTATION; BUSES (VEHICLES); FUEL ECONOMY; PURCHASING

AVAILABILITY: U.S. Dept. of Energy, Voluntary Truck and Bus Fuel Economy Program, Washington, DC 20061

94

<94>
BRI Systems Inc.
ADDRESS: Phoenix, Ariz. 85068
TITLE: Fuel Economy Through Teamwork: Purchasing for Fuel Economy

Energy Savings in School Transportation Publication Series No. 1, 16 p.

1977, October 7

SPONSOR: U.S. Dept. of Transportation

KEYWORDS: PASSENGER TRANSPORTATION; BUSES (VEHICLES); BUSES (VEHICLES); FUEL ECONOMY; OPERATING COSTS; PLANNING

AVAILABILITY: U.S. Dept. of Energy, Voluntary Truck and Bus Fuel Economy Program, Washington, DC 20061

95

<95>
BRI Systems Inc.
ADDRESS: Phoenix, Ariz. 85068

108 p.

1977, October 7

SPONSOR: U.S. Dept. of Transportation, Office of the Secretary

KEYWORDS: FUEL ECONOMY; PLANNING; SCHOOLS; BUSES (VEHICLES); HANDBOOKS; PLANNING; OPERATING COSTS; PUBLIC RELATIONS

AVAILABILITY: U.S. Dept. of Energy, Voluntary Truck and Bus Fuel Economy Program, Washington, DC 20061

96

<96>
Bingham, R.D.: Gallopon, N.B.; Jackson, R.W.
General Motors Corp., Research Laboratories
ADDRESS: Warren, MI 48090
TITLE: Exhaust Emissions, Fuel Economy, and Driveability of Vehicles Fueled with Alcohol-Gasoline Blends
Cambridge Systematics Inc.
ADDRESS: Cambridge Square Plaza, 300 Main St.,
Cambridge, MA 02142
TITLE: State Energy Conservation Plans: Guidelines for Travel Demand Analyses of
Transportation Systems to Promote Corridors, Transpools, and Public Transportation
1976, November
SPONSOR: Federal Energy Administration, Office of
Policy and Program Evaluation, Office of
Conservation Policy; Federal Energy
Administration, Office of Energy Conservation
and Environment
KEYWORDS: ENERGY CONSERVATION; CARPOOLS;
TRANSPOOLS; PUBLIC TRANSPORTATION; TABLES
(DATA); GRAPHS (CHARTS); TRANSPORTATION;
PLANNING; STATE GOVERNMENT; GOVERNMENT
POLICIES; DEMAND (ECONOMICS); FORECASTING;
HYPOTHETICAL
AVAILABILITY: NTIS

Campbell, R.A.
Electric Vehicle Council
ADDRESS: 90 Park Ave., New York, NY 10016
TITLE: Report of a Future Population of Electric
Vehicles on the Electric Power Industry
Paper presented at the Fourth International
Electric Vehicle Symposium, held in
Dusseldorf, Germany, August 21 - September 3,
1976, 12 p.
1976, September
KEYWORDS: ELECTRIC VEHICLES; FORECASTING; ENERGY
CONSERVATION; TRANSPORTATION; TRANSPORTATION;
ENERGY CONSUMPTION; VEHICLE REGISTRATION;
TABLES (DATA); SALES; ENERGY DEMAND;
RESIDENTIAL SECTOR; LOAD MANAGEMENT; ELECTRIC
POWER DEMAND
AVAILABILITY: Electric Vehicle Council, 90 Park
Ave., New York, NY 10016 91.90

Campbell, R.A.
Electric Vehicle Council
ADDRESS: 90 Park Ave., New York, NY 10016
TITLE: Analysis of On-Board Electric Vehicle
Experiences of 82 N. U. Utilities
Paper No. 750274, presented at Society of
Automotive Engineers Congress and Exposition,
February 23, 1976, Detroit, MI, 12 p.
1976
SPONSOR: Society of Automotive Engineers
KEYWORDS: ELECTRIC VEHICLES; ELECTRIC NETHERLANDS;
VANS; PERFORMANCE; EFFICIENCY; MAINTENANCE;
TEMPERATURE; AUTOMOBILE倘若; ELECTRIC
POWER DEMAND; ELECTRIC
AVAILABILITY: Society of Automotive Engineers
Inc., 400 Commonwealth Drive, Warrendale, PA
15096

Campbell, R.; Scott, R.; Tolkin, R.
Michigan, University of, Highway Safety Research
Institute
ADDRESS: Ann Arbor, MI 48105
TITLE: Highway Safety Effects of the Energy
Crisis on U.S. Toll Roads
1976, June
SPONSOR: U.S. Dept. of Transportation, National
Highway Traffic Safety Administration
KEYWORDS: ECONOMICS; SAFETY; ACCIDENTS; ENERGY

<103>
CORR.
Civil Engineering, Continuing Engineering Education,
American Society of Civil Engineers (ASCE)
ASSOCIATION: Educational Division, Planning and
Design Divisions; N.D. Dept. of
Transportation, Federal Highway
Report No. PP-232243, FED-HEW-Y-22-9031,
conference held on December 3-5, 1976,
Atlanta, Georgia, 368 p.
1976, May 10
KEYWORDS: ENERGY CONSERVATION; TRANSPORTATION;
CONSTRUCTION; CONFERENCE; ENERGY
CONSUMPTION; PUBLIC TRANSPORTATION; BALL
TRANSPORTATION; EFFICIENCY; ENERGY SUPPLIES;
ENERGY POLICY; TABLES (DATA); GRAPHS
(CHARTS); CONTROL DESIGN; HIGHWAY
TRANSPORTATION
AVAILABILITY: NTIS

<104>
Burd, J.O.; Tucker, L.M.
G.S. Dept. of Defense, Army Materiel Development
and Readiness Command, Foreign Science and
Technology Center
ADDRESS: Washington, DC 20301
TITLE: Electric Vehicle Research, Development,
and Testing: Annual Report (1)
1977, January
KEYWORDS: ELECTRIC VEHICLES; RESEARCH PROGRAMS;
INTERNATIONAL ANALYSIS; HYBRID
ELECTRIC-POWERED VEHICLES; BATTERIES;
ENGINEERING; UTILIZATION; MILITARY EQUIPMENT;
FORECASTING
AVAILABILITY: NTIS

<105>
Stuck, 1.; Bourke, C.B.; Davis, R.; Whittaker, 1.; Gilleople, P.
U.S. Dept. of Energy, Office of Energy Information and
Analysis, Price Analysis
ADDRESS: Washington, DC 20461
TITLE: Monthly Petroleum Product Price Report
Monthly report, approximately 20 p.
KEYWORDS: PETROLEUM PRODUCTS; PRICES; STATISTICS;
HISTORY; SURVEYS
AVAILABILITY: NTIS

<106>
Cleves, K.B.; Polakiewicz, H.L.
University of Tennessee, Transportation Center
ADDRESS: Knoxville, TN
TITLE: Institutional Issues in Urban Freight
Consolidation
1976, December
KEYWORDS: URBAN TRANSPORTATION; CARGO
TRANSPORTATION; ECONOMIC IMPACT; BENEFIT RISK
ANALYSIS; TABLES (DATA); PLANNING;
TRANSPORTATION; GOVERNMENT POLICIES;
DISTRIBUTION; SERVICES; TRUCKS; PROFITS;
EFFICIENCY

<110>
Campbell, R.; Scott, R.; Tolkin, R.
Michigan, University of, Highway Safety Research
Institute
ADDRESS: Ann Arbor, MI 48105
TITLE: Highway Safety Effects of the Energy
Crisis on U.S. Toll Roads
1976, June
SPONSOR: U.S. Dept. of Transportation, National
Highway Traffic Safety Administration
KEYWORDS: ECONOMICS; SAFETY; ACCIDENTS; ENERGY


<112> CARTER, L.B. National Aeronautics and Space Administration, Lewis Research Center. ADDRESS: Cleveland, OH 44135. TITLE: Response of Lead-Acid Batteries to Chopper-Controlled Discharge: Preliminary Results. Technical Memorandum, Report No. 495/1044-1, NASA TM-75034, 6 p. 1978, February. SPONSOR: D.E. Dept. of Energy, Division of Transportation Energy Conservation. KEYWORDS: LEAD-ACID BATTERIES; SIMULATOR; ELECTRIC VEHICLES; VELOCITY; CONTROL; ELECTRIC DISCHARGERS; CAPACITY; DESIGN; ENERGY LOSSES. AVAILABILITY: NTIS.


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TITLE: New EPA Mileage Tests
Car and Driver, 24(2), 26
1978, August
KEYWORDS: ENVIRONMENTAL PROTECTION AGENCY; MILEAGE; TESTING; WEIGHT; AUTOMOBILES; DESIGN; AERODYNAMICS; FUEL ECONOMY

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U.S. Dept. of Energy; Lawrence Livermore
ADDRESS: DBR, Washington, DC 20545, University of California, Berkeley, Ca 94720
TITLE: 1977 Physics Technology Symposium Proceedings
1978, April
SPONSOR: U.S. Postal Service; U.S. Dept. of Transportation
KEYWORDS: HYDROGEN; UTILIZATION; TRANSPORTATION; HYDROGEN-POWERED VEHICLES; DESIGN; ENERGY STORAGE; ELECTRIC VEHICLES; TESTING; TECHNOLOGY ASSESSMENT; MATERIALS; COMMUNICATIONS; DIAGRAMS; COSTS; GRAPHS (CHARTS); COMPARATIVE EVALUATIONS; TABLES (DATA)
AVAILABILITY: NTIS

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Chang, S.C.
Air Research Manufacturing Co.
ADDRESS: Torrance, CA
TITLE: Computer Simulation of an Advanced Hybrid Electric-Powered Vehicle
1978
KEYWORDS: HYBRID ELECTRIC-Powered VehiCLES; COMPUTERIZED SIMULATION; REGENERATIVE FUEL CELLS; FLUIDS; LEAD-ACID BATTERIES; REGENERATIVE BRAKING; ENERGY STORAGE; ENERGY CONVERSION; GRAPHS (CHARTS)
AVAILABILITY: Society of Automotive Engineers
P.O. Box 11, Commonwealth Drive, P.O. Box 115096 $2.50

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Charles River Associates Inc.
ADDRESS: 1500 Massachusetts Ave., Cambridge, MA 02138
TITLE: Methodology for Predicting the Demand for New Electrically-Driven Goods
1977, December
SPONSOR: Electric Power Research Institute
KEYWORDS: ENERGY CONSUMPTION; FORECASTING; ELECTRIC POWER DEMAND; EQUIPMENT; MODELS; SIMULATION; MARKETS; ENERGY EFFICIENCY; REGULATIONS; IMPORTS; PRICES
AVAILABILITY: Electric Power Research Institute, 3412 Hillview Avenue, Palo Alto, CA 94304

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Charles River Associates Inc.
ADDRESS: 1050 Massachusetts Ave., Cambridge, MA 02138
TITLE: Consumer Behavior Toward Fuel Efficient Vehicles: Literature Review
1978, January
SPONSOR: U.S. Dept. of Transportation, National Highway Traffic Safety Administration
KEYWORDS: ATTITUDES; SURVEYS; PURCHASING; HABITS; COSTS; PRICES; FUEL ECONOMY; TRUCKS; ENGINES (VEHICLES)

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Charles River Associates Inc.
ADDRESS: 1050 Massachusetts Avenue, Cambridge, MA 02138
TITLE: Price Elasticity Estimates for Transport Fuel Consumption and Travel Demand: A Review and Bibliography
Interim Report, 83 p.
1975, June
SPONSOR: Federal Energy Administration
KEYWORDS: ELASTICITY (ECONOMICS); FUEL CONSUMPTION; PRICES; GASOLINE; DIESEL FUELS; JET ENGINE FUELS; TRANSPORTATION; PASSENGER TRANSPORTATION; RATES (COSTS); CARGO TRANSPORTATION; ECONOMETRIC MODELS; URBAN AREAS; AUTOMOBILES; BIBLIOGRAPHIES

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Charles River Associates Inc.; Cambridge Systematics Inc.
ADDRESS: CAM, 1050 Massachusetts Avenue, Cambridge, MA 02138; CSI, Cambridge, MA
Report No. PB-271816, FRA/P-77/374, CPA 280, 397
1977, March
SPONSOR: Federal Energy Administration, Office of Conservation, Transportation Programs
KEYWORDS: ENERGY CONSERVATION; CARGO TRANSPORTATION; INTERSTATE TRANSPORTATION; GOVERNMENT POLICIES; TAXES; ENERGY CONSUMPTION; MARKETS; EFFICIENCY; INTERSTATE COMMERCE COMMISSION; ECONOMIC ANALYSIS; TABLES (DATA); REGULATIONS; FUEL CONSUMPTION; DEMAND (ECONOMICS)
AVAILABILITY: NTIS

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Cherniavsky, E.A.; Vodas, E.S.; Davideff, J.M.
Brookhaven National Laboratory, National Center for Analysis of Energy Systems, Energy Models Group
ADDRESS: Upton, NY 11973
TITLE: Multi-Objective Function Analysis of ENDA Forecast-2, Year-2000 Scenario
1977, May
SPONSOR: Energy Research and Development Administration, Office of Planning, Analysis and Evaluation
KEYWORDS: FORECASTING; ENGINEERING; IMPORTS; ENERGY SYSTEMS; ENERGY MODELS; OPTIMIZATION; CAPITAL; COSTS; ENVIRONMENTAL IMPACT; TABLES (DATA)
AVAILABILITY: NTIS
Cromer, R. A.; Breslau, C. A.; Crease, J. F.; Bodie, Y. V.; Holbe, R. E.; Slauch, K. A.; Lyons, A. G.; Elsasser, H.; Wilke, M. F.; Slade, F. M.; Vlachos, T. J.; Tuch, N. H.; vertically integrated battery research organization.

**Title:** Development of lithium/sulfur battery technology for electric vehicle propulsion

**Abstract:**


**Keywords:** Lithium-Ion Sulfur Batteries; Lithium/Niobium Sulfide Batteries; Electric Vehicles; Research; Design; Testing; Performance; Diagnoses

**Availability:** Electric Vehicle Council, 90 Park Ave., New York, NY 10016 

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Cromer, R. A.; Breslau, C. A.; Lyons, A. G.; Elsasser, H.; Wilke, M. F.; Slauch, K. A.; Vlachos, T. J.; Tuch, N. H.; vertically integrated battery research organization.

**Title:** Lithium Requirements for High-Energy Lithium-Aluminum/Sulfide Batteries for Load-Leveling and Electric-Vehicle Applications


**Sponsor:** Energy Research and Development Administration, Assistant Administrator for Conservation

**Keywords:** Lithium; Lithium-Aluminum/Sulfide Batteries; Electric Vehicles; Energy Storage; Load Management; Electric Utilities; Demand Forecasting; Lithium-Aluminum/Sulfide Batteries

**Availability:** NBS

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**Title:** Decisions Making and Implications for Energy Use - Some Economic Considerations

**Paper published in Transportation Research Board Special Report 166, 10-17 1976.**

**Keywords:** Highways; Capital Costs; Energy

**Availability:** National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave., N.W., Washington, DC 20418 

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**Title:** Airplane View on Optimizing Materials and Energy

**Paper published in Transportation Research Board Special Report 186, 29-40 1976.**

**Keywords:** Highways; Materials; Energy Consumption; Construction; Chemicals; Abstracts; Standards

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**Title:** Fuel Consumption in European Passenger Cars Powered by Gasoline, Diesel, and Direct Injection Stratified Charge Engines


**Keywords:** Fuel Consumption; Automobiles; Gasoline; Diesel Fuel; Stratified Charge Engines; Europe; Computed Simulation; Comparative Evaluations; Automotive Emissions; Tables (Data); Graphs (Charts); Efficiency; Performance

**Availability:** Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15086

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**Title:** Aircraft Operating Costs and Performance Report for Calendar Years 1975 and 1976

**Annual report, Volume II, 134 p. 1977, 2937.**

**Keywords:** Aircraft; Operating Costs; Performance; Tables (Data); Financial Data; Statistics; Traffic; Capacity

**Availability:** GPA, Stock No. 003-006-00073-5

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**Title:** Aircraft Operating Costs and Performance Report: Domestic and International Operations of the U.S. Supplemental Air Carrier, Calendar 1963 - Fiscal 1975


**Keywords:** Aircraft; Operating Costs; Performance; Operation; Report; Statistics; Tables (Data); Costs; Jet Aircraft; Air Transportation

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Cromer, R. A.; Breslau, C. A.; Lyons, A. G.; Elsasser, H.; Wilke, M. F.; Slauch, K. A.; Vlachos, T. J.; Tuch, N. H.; vertically integrated battery research organization.

**Title:** Aircraft Equipment Needs and Financing Through 1985

**46 p. 1975, October.**

**Keywords:** Air Transportation; Equipment; Forecasting; Financing; Traffic; Capacity;
Civil Aeronautics Board, Bureau of Accounts and Statistics, Statistical Data Division
ADDRESS: Washington, DC 20426
TITLE: Cover Letter Carriers Traffic Statistics:

Annual Report, 40 p.
1977, November
KEYWORDS: AIRCRAFT; TRAFFIC; STATISTICS; AIR TRAVEL; SCHEDULES; PASSENGER TRANSPORTATION; AIRPORTS

Civil Aeronautics Board, Bureau of Accounts and Statistics, Statistical Data Division
ADDRESS: Washington, DC
TITLE: Traffic Carriers—Coach Class: Traffic, Revenue, Yield, and Average On-Flight Trip Length by Fare Category (60 State Ranks)

Monthly publication, formerly titled "Coach Traffic, Revenue, Yield and Average On-Flight Trip Length by Fare Category for the 60 State Operations of the Domestic Trunk", v.p.

KEYWORDS: TRAFFIC; REVENSE; REGIONAL ANALYSIS; TABLES (DATE); PASSENGER ENPLOYMENTS

Civil Aeronautics Board, Bureau of Operating Rights, Standards Division
ADDRESS: Washington, DC 20426
TITLE: A Profile of All Routes in the 48 contiguous States, June 1, 1975

1977, June 1
KEYWORDS: AIR TRANSPORTATION; TABLES (DATA); REGIONAL ANALYSIS; SERVICES; AIRCRAFT; PASSENGER TRANSPORTATION; POPULATION (STATISTICS); URBAN AREAS; STATISTICS; PASSENGER ENPLOYMENTS

Civil Aeronautics Board, Bureau of Operating Rights, Standards Division
ADDRESS: Washington, DC 20426
TITLE: Local Service Carriers Passengers Enployments: Fiscal Years 1976 and 1975

1975, July
KEYWORDS: PASSENGER ENPLOYMENTS; PASSENGER TRANSPORTATION; AIRPORTS; AIRCRAFT; STATISTICS; TABLES (DATA); REGIONAL ANALYSIS; SERVICES

Civil Aeronautics Board, Bureau of Operating Rights, Standards Division
ADDRESS: Washington, DC 20426
TITLE: Franklin Carrier Domestic Passengers Enployments: Fiscal Years 1976 and 1975

1975, July
KEYWORDS: PASSENGER TRANSPORTATION; AIR TRANSPORTATION; REGIONAL ANALYSIS; STATISTICS; TABLES (DATE); PASSENGER ENPLOYMENTS; SERVICES

Civil Aeronautics Board, Bureau of Accounts and Statistics, Statistical Data Division
ADDRESS: Washington, DC
TITLE: Air Carrier Traffic Statistics:

Annual Report, 40 p.
1977, August
KEYWORDS: AIRCRAFT; PASSENGER TRANSPORTATION; AIR TRANSPORTATION; REGIONAL ANALYSIS; STATISTICS; TABLES (DATE); PASSENGER ENPLOYMENTS; SERVICES

Civil Aeronautics Board, Bureau of Accounts and Statistics, Statistical Data Division
ADDRESS: Washington, DC
TITLE: Carrier Traffic September 1976

1977, September
KEYWORDS: AIRCRAFT; AIR TRAFFIC; STATISTICS; AIR TRAVEL; SCHEDULES; PASSENGER TRANSPORTATION; AIRPORTS

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ADDRESS: Washington, DC
TITLE: Air Carrier Traffic Statistics:

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KEYWORDS: AIRCRAFT; PASSENGER TRANSPORTATION; AIR TRANSPORTATION; REGIONAL ANALYSIS; STATISTICS; TABLES (DATE); PASSENGER ENPLOYMENTS; SERVICES

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KEYWORDS: AIRCRAFT; PASSENGER TRANSPORTATION; AIR TRANSPORTATION; REGIONAL ANALYSIS; STATISTICS; TABLES (DATE); PASSENGER ENPLOYMENTS; SERVICES

Civil Aeronautics Board, Bureau of Accounts and Statistics, Statistical Data Division
ADDRESS: Washington, DC
TITLE: Air Carrier Traffic Statistics:

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KEYWORDS: AIRCRAFT; PASSENGER TRANSPORTATION; AIR TRANSPORTATION; REGIONAL ANALYSIS; STATISTICS; TABLES (DATE); PASSENGER ENPLOYMENTS; SERVICES

Clark, J.W.
ADDRESS: Seattle, WA 98105
TITLE: Directing the Evaluation of Urban Land Use to Achieve Improved Transportation System Performance

Paper presented at the 54th Annual Meeting of the Transportation Research Board, published in Transportation Research Record 565, 61-74

SPONSOR: National Academy of Sciences, Transportation Research Board

Clark, J.W. (ed.)
ADDRESS: Transportation Research Board

National Academy of Sciences, Transportation Research Board

Commission on Sociotechnical Systems
ADDRESS: 201 Constitution Avenue NW, Washington, DC


Transportation Research Board Special Report 149, proceedings of a workshop sponsored and conducted by the Transportation Research Board Committee on Energy Conservation and Transportation Demand, Washington, DC, October 7-9, 1975, 55 p.

SPONSOR: Federal Energy Administration, U.S. Dept. of Transportation, Transportation System Center

KEYWORDS: GASOLINE; CONSUMPTION; VEHICLES; EFFICIENT; AUTOMOBILES; SALE; FUEL CONSUMPTION; BAKED; ENERGY CONSERVATION; FORECASTING; SURVEY (ECONOMICS); 5553


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Karch, T., 1978,

Kark chronology: Air Transportation; Transportation simulation: Costs: Tables (DATA): Regional analysis: urban areas: Transportation: Airports: Urban transportation

Availability: NTIS

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K & Data Resources Inc. Inc.

Address: Lexington, MA

Title: A study of the demand for gasoline

Final report, report no. PB-235254, 146 p.

SPONSOR: Executive Office of the President, Council on Environmental Quality: U.S. Department of Transportation

SYSTEMS: GASOLINE: PRICES; FUEL CONSUMPTION: DEMAND (ECONOMIC): TAXES; VEHICLES; GROSS NATIONAL PRODUCT: INCOME; ECONOMIC MODELS; FORECASTING: AUTOMOBILES; TABLES (DATA); ELASTICITY (ECONOMIC): ECONOMIC IMPACT

Availability: NTIS

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Address: Livermore, CA

Title: Battery-electric hybrid electric vehicle system for year-two application. Volume 1: System description. Volume 2: System design

Informal report, report no. UCID-17095, 52 pages for Volume 1, 81 pages for Volume II

1976, April 19

SPONSOR: Energy Research and Development Administration


Availability: NTIS

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Davis, B.B.; Briner, R.J.; Younger, P.C.; Epp, R.C.; Lerner, S.H.

Lawrence Livermore Laboratory

Address: University of California, P.O. Box 500, Livermore, CA 94550

Title: Determination of the effectiveness and feasibility of a supersonic scaling system for electric and other automobiles. Volume I - Summary

Report no. UCRL-52306/1, 74 p.

1977, September 9

SPONSOR: Energy Research and Development Administration, Division of Transportation Energy Conservation


Availability: NTIS

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Lawrence Livermore Laboratory

Address: University of California, Livermore, Ca 94550

Title: Determination of the effectiveness and feasibility of a supersonic scaling system for electric and other automobiles. Volume II: Design study and analysis


1977, September 9

SPONSOR: Energy research and development administration, Division of Transportation Energy Conservation


Availability: NTIS

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Davis, F.W.; Burkhalter, D.A.

Title: Vanpooling institutional barriers


1976, May

SPONSOR: E.E. Dept. of Energy, Assistant Secretary for Conservation and Solar Applications, Transportation Programs Office


Availability: GPO, Stock no. 061-000-00005-2

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Davis, F.W., Jr.; Own, R.

Tennessee, University of, Transportation Center

Address: Knoxville, TN 37916

Title: Solving public passenger transportation problems by data for policy recommendation. Volume II


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SPONSOR: E.E. Dept. of Transportation, Office of the Secretary, Office of University Research


Availability: NTIS

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Dayan, E., Jr.

California Institute of Technology, Jet Propulsion Laboratory

Address: Pasadena, CA

Title: Realistic effects of wind on the aerodynamic resistance of automobiles


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Availability: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15086 2.50
Doegott, R.M.; Reyer, R.
International Research and Technology Corp.
ADDRESS: 7655 Old Springhouse Road, Holtsan, VA 22121

TITL: The Transportation Energy Conservation Network (TECNET): A Summary Description
1978, March 10
SPONSOR: Oak Ridge National Laboratory, Energy Division, Data Management and Analysis Group
KEYWORDS: TRANSPORTATION; ENERGY CONSERVATION; NETWORK; ENVIRONMENTAL IMPACT; ECONOMIC IMPACT; TABLES (DATA); MODELS; GOVERNMENT POLICIES; SIMULATION; MATERIALS; TRANSPORTATION

Doegott, R.M.; Reyer, R.; Keller, R.
International Research and Technology Corp.
ADDRESS: 7655 Old Springhouse Rd., Holtsan, VA 22121

TITL: The Scenario of Transportation Energy Conservation Using TECNET
1977, June
SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation, Data Management and Analysis Group
KEYWORDS: FORECASTING; MODELS; TRANSPORTATION; SCENARIOS; DEMAND; ENERGY CONSERVATION; AUTOMOTIVE ENGINES; CHAINAGE CYCLE; STEERING ENGINES; INTERNAL Combustion Engines; ECONOMIC IMPACT; Energy INTENSITY; MARKET; ENERGY CONSUMPTION; AUTOMOBILES; TRUCKS; VEHICLE MILES TRAVELED; CROSS NATIONAL PRODUCT; RELEASE; TABLES (DATA)

Dobler, A.F.
General Motors Corp., Research Laboratories
ADDRESS: Warren, MI
TITL: Transient System Optimization of an Experimental Engine Control System Over the Federal Emissions Driving Schedule
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KEYWORDS: FUEL ECONOMY; AUTOMOTIVE ENGINE CONTROL; AUTOMOTIVE ENGINES; FUEL CONSUMPTION; SIMULATION; ENGINE; PRACTICAL CONSIDERATIONS
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15086 $2.50

Domenico, J.J., Jr.; Reamer, R.G.
Aerospace Corp., Environment and Energy Conservation Division, Vehicle Systems Group, Office of Energy Conservation
TITL: Fuel Conservation and Engine Traceplot Projection for the Highway Transportation Sector
78 p.
1978, April 28
SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation, Office of Transportation Systems, Vehicle Systems Branch
KEYWORDS: FUEL CONSERVATION; HIGHWAY TRANSPORTATION; AUTOMOBILES; TRUCKS; BUSES (PASSENGERS); MOTORCYCLES; AIRCRAFT; MILITARY ENGINES
SALES; FORECASTING; WEIGHT; CLASSIFICATIONS; TABLES (DATA); SIZE; FUEL ECONOMY

Donovan, Hammers and Battelle Inc.
ADDRESS: 1055 Thomas Jefferson St., Suite 444, Washington, DC 20007
TITL: Energy, the Environment and Land Use: Literature Review
Report No. NCHR-13710 (Pt. 1), 190 p.
1976, November 5
SPONSOR: Lawrence Livermore Laboratory, Office of Environmental Policy
KEYWORDS: BIBLIOGRAPHY; ENERGY SUPPLIES; COAL; NUCLEAR ENERGY; PETROLEUM; NATURAL GAS; ALTERNATE USES; ELECTRIC POWER GENERATION; ENERGY CONSUMPTION; ENERGY CONSERVATION; RESOURCE SECTOR; COMMERCIAL SECTOR; TRANSPORTATION; AGRICULTURE; LAND USE; ENVIRONMENTAL IMPACT
AVAILABILITY: NITS

Donovan, Hammers and Battelle Inc.
ADDRESS: 1055 Thomas Jefferson St., Suite 444, Washington, DC 20007
TITL: Energy, the Environment, and Land Use
Final Report
1976, November 5
SPONSOR: Lawrence Livermore Laboratory, Office of Environmental Policy
KEYWORDS: LAND USE; ENVIRONMENTAL IMPACT; ENERGY CONSERVATION; RESOURCE SECTOR; ELECTRIC POWER GENERATION; POLLUTION; ECONOMIC ANALYSIS; SIZE SELECTION; COAL; PETROLEUM; TRANSPORTATION; PRODUCTION; POLLUTION; WASTE DISPOSAL
AVAILABILITY: NITS

Duffy, M.A.; Ridger, G.L.; Hathorn, C.R.; Drago, V.J.
Battelle Columbus Laboratory
ADDRESS: 505 King Avenue, Columbus, OH 43201
TITL: General Aviation Dynamics: An Extension of the Cost Impact Study to Include Intercity Flights for the Forecasting of General Aviation Activity
Volume 1-2
Report No. 75A-470-77-20, 175 p.
1977, April
SPONSOR: U.S. Dept. of Transportation, Federal Aviation Administration, Office of Aviation Policy, Aviation Forecast Branch
KEYWORDS: FORECASTING; AVIATION; OPERATING COSTS; MODELS; DATA Bases; SIMULATION; AIRCRAFT; FUEL CONSUMPTION; UTILIZATION; TABLES (DATA); GRAPHS (CHARTS); GOVERNMENT POLICIES; REGULATIONS; DEMAND (ECONOMICS); AIR TRANSPORTATION; OPERATIONS
AVAILABILITY: NITS

Dupps, R.C., Jr.
U.S. Dept. of Interior, Bureau of Mines, Division of Interioal Studies
ADDRESS: Washington, DC 20240
TITL: Energy Consumption in the Transportation Sector
Paper presented at the Fourth National Conference on the Effects of Energy Constraints on
1977
KEYWORDS: ENERGY CONSERVATION; TRANSPORTATION; PETROLEUM; PETROLEUM PRODUCTS; LIQUEFIED PETROLEUM GASES; JET ENGINE FUELS; GASOLINE; DISTILLATES; FUEL OIL; RESIDUAL OILS; TABLES (DATA); GRAPHS (CHARTS); REGIONAL ANALYSIS

<188> Dulaney, E.G.; DeLong, R.J.
National Aeronautics and Space Administration, NASA Lewis Research Center
ADDRESS: Cleveland, OH 44135
TITLE: Test and Evaluation of 33 Electric Vehicles for State-of-the-art Assessment

U.S. Dept. of Transportation, Transportation Systems Center
ADDRESS: Kendall Square, Cambridge, MA 02142
TITLE: The Daylight Saving Time Study
Executive Summary – Final Report on the Operation and Effects of Daylight Saving Time
26 p.
1978, July
SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Administrator for Policy, Plans and International Affairs, Office of Transportation Energy Policy
KEYWORDS: ENERGY CONSERVATION; LEGISLATION; ENERGY EXIT; TRAFFIC; DAYLIGHT SAVING TIME; TRANSPORTATION; ELECTRIC TUGS; PUBLIC OPINION; ENERGY USE; GOVERNMENT POLICIES; ACCIDENTS; TABLES (DATA)

<190> Ellwood, H.R.
U.S. Dept. of Energy, Division of Transportation Energy Conservation
ADDRESS: Washington, DC 20545
TITLE: Comparative Automotive Engine Operation When Fueled with Ethanol and Methanol
1979, May
KEYWORDS: ALTERNATE FUELS; AUTOMOTIVE ENGINES; ETHANOL; METHANOL; GASOLINE; PERFORMANCE; CONTRASTIVE EVALUATIONS; FUEL ECONOMY; AUTOMOTIVE EMISSIONS TESTING; TABULATION (CHARTS); REFERENCE
AVAILABILITY: OPD, Stock No. 061-000-00074-7

<191> Energy and Environmental Analysis Inc.
ADDRESS: 770 North Fort Myer Drive, Arlington, VA 22209

<192> Energy Research and Development Administration
ADDRESS: Washington, DC
1974
SPONSOR: Electric Vehicle Council
KEYWORDS: ELECTRIC VEHICLES; RESEARCH; BATTERIES; NUCLEAR THERMAL SYSTEMS; ELECTRIC POWER HERNANDO UTILITIES; ENVIRONMENTAL IMPACT; PASSENGER TRANSPORTATION; AUTOMOBILES; ELECTRIC VEHICLE RANGE; MARKET; TRUCKS; MAINTENANCE; HYBRID ELECTRIC-POWERED VEHICLES; UTILIZATION; ELECTRIC RAIL SYSTEMS; PERFORMANCE; EFFICIENCY; ECONOMIC ANALYSIS; PRODUCTION; BUSES (VEHICLES); DRIVING CYCLE; INTERNATIONAL ANALYSES; DIAGRAMS; PHOTOGRAPHS
AVAILABILITY: NTIS

<193> Energy Research and Development Administration
ADDRESS: Washington, DC
TITLE: Bibliography Energy Extension Service
1977, April
KEYWORDS: BIBLIOGRAPHIC; ENERGY CONSERVATION; SOLAR ENERGY; ENERGY CONSUMPTION; BUILDINGS; BEHAVIOR; ENERGY POLICY; ECONOMICS; WASTE PROCESSING; ENERGY DEMAND; ENERGY SHORTAGES; ENERGY RESOURCES; FOSSIL FuELS; AGRICULTURE; NUCLEUS; INDUSTRIES; TRANSPORTATION
AVAILABILITY: U.S. Dept. of Energy, Technical Information Center, P.O. Box 62, Oak Ridge, TN 37830

<194> Energy Research and Development Administration
ADDRESS: Washington, DC
TITLE: State-of-the-art (SOA) Test and Data Project Review and Near-Term Electric Vehicle R&D Program Review
1977, May 20
KEYWORDS: ELECTRIC VEHICLES; TESTING; HYBRID ELECTRIC-POWERED VEHICLES; OR VEHICLES; VELOCITY; GRAPHS (CHARTS); PHOTOGRAPHS; RESEARCH; PERFORMANCE
Federal Electric Administration, Office of Energy Information and Analysis, Office of Data and Analysis, ICP Inc.
Volume 1 of 15 volumes, Report No. PB-265572, PB-265572, 57; PB-265572, 68 p., 1976, September
AVAILABILITY: NTIS

Federal Electric Administration, Office of Energy Information and Analysis, Office of Data and Analysis, ICP Inc.
Volume 11 of 15 volumes, Report No. PB-265574, PB-265574, 80 p., 1976, September
AVAILABILITY: NTIS

Federal Electric Administration, Office of Energy Information and Analysis, Office of Data and Analysis, ICP Inc.
Volume 1 of 15 volumes, Report No. PB-263020, PB-263020, 437 p., 1976, September
AVAILABILITY: NTIS

Federal Electric Administration, Office of Energy Information and Analysis, Office of Data and Analysis, ICP Inc.
TITLE: Findings and Views Concerning the Regulation of Motor Gasoline from the Use of Motor Gasoline and Price Regulations. Final Report
Report No. FPA/PS-7/7/73/37, 576 p., 1977, September
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Report No. HFRC-R-77-5, 52 p.
1977, July

KEYWORDS: Tables (Data); Shapes (Charts); Fuel Consumption; Automobiles; Highway Transportation; Automotive Emissions; Comparative Evaluations; Energy Conservation

AVAILABILITY: NTIS

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Florida Dept. of Administration, State Energy Office

Title: Monthly Florida Motor Gasoline Consumption: January 1969 through December 1976

43 p.
1977, June

KEYWORDS: Florida; Gasoline; Consumption; State Energy Office; Planning; Tables (Data); Regional Analysis; Maps

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Fleet, R.B.; Butts, L.B.; Roth, R.D. American Trucking Associations Inc., Dept. of Research and Transport Economics

Address: 1716 P Street NW, Washington, DC 20036

Title: The Ten-Site Study: Does it Properly Measure Transportation Output?


1976

KEYWORDS: Transportation; Evaluation; Cargo Transportation; Highways; Rail Transportation; Trucks; Fuel Consumption; Comparative Evaluations

<229>
Finn, L. U.S. Dept. of Transportation, National Highway Traffic Safety Administration, Technical Reference Division

Address: Washington, DC 20590

Title: Recreational Vehicles: A Subject Bibliography from Highway Safety Literature

1977, July

KEYWORDS: Bibliographies; Recreational Vehicles; Abstracts; Vans; Mobile Homes; Safety

AVAILABILITY: NTIS

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Finn, L. U.S. Dept. of Transportation, National Highway Traffic Safety Administration, Technical Reference Division

Address: Washington, DC 20590

Title: Motor Vehicle Titling and Registration: A Subject Bibliography from Highway Safety Literature

1977, June

KEYWORDS: Bibliographies; Abstracts; Vehicles; Vehicle Registrations; Safety; Regional Analysis; Automobiles; Motorcycles; Highway Transportation

AVAILABILITY: NTIS

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Foster, E.J.; Menach, R.R. California Dept. of Transportation, Sacramento

Address: PO Box 3483, CA 95812

Title: A New Direction for the Highway Program

Report presented at the 49th Annual Meeting of the Transportation Research Board, published in Transportation Research Record 855, pp. 1-10

1976

KEYWORDS: Highways; Construction; California; Transportation; Planning; Safety; Operating Costs; Financing; Shapes; Research; Forecasts

AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418

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Foster, E.J. U.S. Dept. of Transportation, Urban Mass Transportation Administration

Address: Washington, DC

Title: Walk Time From Vehicle to Final Destination

Paper presented at the 52nd Annual Meeting of the Transportation Research Board, published in Highway Research Record No. 439, pp. 29-31

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SPONSOR: National Academy of Sciences, National Research Council, Highway Research Board

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AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418

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Foster, E.J. Hansen, University of Oregon Program in Transportation, Renewable Technology Associates

Address: OR, Corvallis, OR 97332-1870, ST-3, St. John's, WA

Title: Alternative Fuels and Intensity Tracking

Report No. NCP/M229-01, 302 p.
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SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation

KEYWORDS: Alternative Fuels; Trucks; Intensity Transportation; Technology Assessment; Energy Conservation; Diesel Engines; Tractors; Fuel Conservation; Highway Transportation; Ownership; Smart Meters; Energy Resources; Commercialization; Design; Demonstration; Tables (Data); Diagrams

AVAILABILITY: NTIS

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Address: St. John's, WA

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1976, September
SPOKON: Energy Research and Development
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KEYWORDS: HYDROGEN FUELS; RAIL TRANSPORTATION;
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DIESEL ENGINES; METAL CORROSION ENGINEERING;
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TABLES (DATA); GRAPHS (CHARTS)
AVAILABILITY: NTIS

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ADDRESS: East Sandwich, MA
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1977, February
SPOKON: Energy Research and Development
Administration, Office of Planning and Analysis,
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KEYWORDS: NET ENERGY; ENERGY CONSUMPTION; ENERGY
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SPACE HEATING; NATURAL GAS; WATER HEATING; AIR
CONDITIONING; ELECTRIC POWER; NATURAL GAS;
PROBLEMS; COAL; SOLAR SPACE HEATING; HEAT
POPS; ANNUAL CYCLE ENERGY SYSTEM; STEAM;
ELECTRIC POWER; AUTOMOBILES; ELECTRIC
VEHICLES; TRANSPORTATION; INPUT-OUTPUT
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GEOGRAPHICAL ENERGY; HYDROELECTRIC POWER;
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ADDRESS: Westgate Park, McLean, VA
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Report No. FH-26-1805, FHA-6859 75-63, FH-6808,
44 p.
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SPOKON: U.S. Dept. of Transportation, Federal
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CONSUMPTION; RESIDENTIAL SECTOR; RAIL
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GREENNESS; ENERGY CONSUMPTION; GRAPHS (CHARTS)
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ADDRESS: Chestnut Hill, MA
TITLE: Travel Behavior - A Synthesized Theory
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SPOKON: National Academy of Sciences, National
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Board, National Cooperative Highway Research
Program, American Association of State
Highways and Transportation Officials; U.S.
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ADDRESS: Washington, DC
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KEYWORDS: REGIONAL ANALYSIS; INCOME; URBAN AREAS;
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SOUTHERN STATES: ROCKY MOUNTAINS;
MANUFACTURING: GRAPHS (CHARTS); LABOR
MIGRATION; EARNINGS; TABLES (DATA); STATE
ANALYSIS

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U.S. Dept. of Energy, Energy Information
Administration, Division of Consumer Data
Studies
ADDRESS: Washington, DC 20546
TITLE: Federal Energy Data System (FEDS):
Statistical Summary
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FEEDSTOCKS; BUILDING MATERIALS; RESIDENTIAL
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TRANSPORTATION; ELECTRIC UTILITIES; STATE
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University of Mississippi, Dept. of Chemical
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ADDRESS: Rolla, MO 65401
TITLE: Toward Establishing a National Energy
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IMPORTS; TABLES (DATA); ENERGY CONVERSION;
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ADDRESS: Palo Alto, CA
TITLE: The Lithium-Water-Air Battery for
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ADDRESS: Warren, MI 48090

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KEYWORDS: ENVIRONMENTAL PROTECTION AGENCY; FUEL ECONOMY; TABLES (DATA); FORECASTING; TRANSPORTATION: AUTOMOBILES; AUTOMOBILE MANUFACTURING: PASSENGER TRANSPORTATION; SALE; MEASUREMENTS; CAPACITY; DESIGN; NETWORK TESTING: CLASSIFICATIONS; AUTOMOTIVE MACHINES

<251> George Washington University, Program in Policy Studies in Science and Technology
ADDRESS: Washington, DC
TITLE: Definition Study for a Net Energy Assessment: The Washington, D.C. Metropolitan System: Volume I and II (Appendices)
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ADDRESS: 1776 Massachusetts Ave. NW, Washington, DC
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ADDRESS: P.O. Box 1025, Princeton, N.J. 08540
TITLE: A Synthesized Engine Oil Providing Fuel Economy Benefits

Paper No. 760854, published in SAE SP-817, 11-21 1976
SPONSOR: Society of Automotive Engineers, Michigan Section
KEYWORDS: AUTOMOTIVE ENGINES; PERFORMANCE; FUEL ECONOMY; LUBRICATING OILS; COMPARATIVE TESTS; IMPROVEMENTS
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15086 for SAE SP-817

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General Motors Corp., Research Laboratories, Transportation and Urban Analysis Dept.
ADDRESS: Warren, N.J. 08090
TITLE: Comparison of Segmentations for Modeling Consumers' Preferences for Transportation Modes

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Gossan, R.C.
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ADDRESS: Los Angeles, CA
TITLE: Use of Natural Gas as a Primary Vehicular Fuel for a Public Utility Fleet

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KEYWORDS: AUTOMOBILES; "MIDH-C"; AUTOMOBILE EMISSIONS; UTILIZATION; FUEL CONSUMPTION; MAINTENANCE; OPERATING COSTS; PUBLIC UTILITIES; ALTERNATE FUELS
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New York State Dept. of Transportation, Planning Division
ADDRESS: Albany, N.Y. 12232
TITLE: Automotive Energy Use: A Baseline Projection for New York State

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KEYWORDS: NEW YORK; ENERGY CONSUMPTION; FORECASTING; AUTOMOBILES; FUEL CONSUMPTION; EFFICIENCY; GROWTH; VEHICLES; GASOLINE; VEHICLE REGISTRATIONS; TABLES (DATA); REGIONAL ANALYSIS; FUEL ECONOMY; HIGHWAY TRANSPORTATION; URBAN TRANSPORTATION; VEHICLE MILES TRAVELLED

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ADDRESS: 711 Third Ave., New York, NY
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SPONSOR: Federal Energy Administration, Office of Industrial Reporting Progress
KEYWORDS: ENERGY CONSERVATION; PETROLEUM INDUSTRY; COAL INDUSTRY; EQUIPMENT; DESIGN; DIAGRAMS; HEAT EXCHANGERS; TANKS; MAPS; OCTANE; PETROLEUM REFINING; CONCRETE; ASPHALT; LUBRICATING OILS; CAPITAL COSTS; ECONOMIC ANALYSIS; PETROLEUM PRODUCTS; EFFICIENCY; COKE; FORECASTING; GASOLINE; ENERGY CONSUMPTION; POLLUTION CONTROL; CAPACITY; PETROLEUM
AVAILABILITY: NTIS

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ADDRESS: Kendall Square, Cambridge, MA 02142
TITLE: Highway Fuel Consumption Computer Model: Version 1
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ADDRESS: Washington, DC
TITLE: Vanpooling: An Update
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AVAILABILITY: GPO
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ADDRESS: Washington, DC 20212
TITLE: Employment and Earnings
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Oak Ridge National Laboratory, Energy Division, Regional and Urban Studies Section
ADDRESS: Oak Ridge, Tennessee

TITLE: An Investigation of the Variability of Gasoline Consumption Among States

REPORT NO. ORNL-5391, 61 P.
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SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation, Data Analysis Branch

KEYWORDS: DETERMINANTS: GASOLINE; FUEL CONSUMPTION; MODELS; STATE ANALYSIS; MEASURES: LONG-TERM; GROWTH; VEHICLE MILES TRAVELED; VEHICLE REGISTRATION; AUTOMOBILES; COVERS: AUTOMOBILE OWNERS; EXTERNAL DEMAND; COMPETITIVE EVALUATIONS

AVAILABILITY: NTIS

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ADDRESS: Oak Ridge, Tennessee

TITLE: Regional Transportation Energy Conservation Data Book; Edition 1

REPORT NO. ORNL-5435 Special, 530 P.
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SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation

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AVAILABILITY: NTIS

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Green, R.
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ADDRESS: Jerusalem, Israel

TITLE: Economic Approach to Value of Time and Transportation Choice

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SPONSOR: National Academy of Sciences, Transportation Research Board

KEYWORDS: TRAVEL TIME; TRANSPORTATION; ECONOMIC ANALYSIS; VEHICLE TRIPS: GRAPHS (CHARTS): DISTANCE

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ADDRESS: New York, N.Y.

TITLE: Development of a High Performance and...
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KEYWORDS: FLYWHEELS; ELECTRIC VEHICLES; HYBRID ELECTRIC-POWERED VEHICLES; ELECTRIC VEHICLES; BATTERIES; TESTING; TECHNOLOGY; DESIGN; GRAPHS (CHARTS)

AVAILABILITY: Electric Vehicle Council, 90 Park Ave., New York, NY 10016 $1.50

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SPOKES: U.S. Dept. of Energy, Division of Transportation Energy Conservation

KEYWORDS: VEHICLE TRIPS; DISTANCE; AUTOMOBILES; FUEL ECONOMY; GASOLINE; FUEL ADDITIVES; TESTING; DRIVING CYCLE; ENGINEERING; OCTANE; SEASONAL VARIATIONS; AUTOMOTIVE EMISSIONS

AVAILABILITY: GOP, Stock No. 001-000-05112-3

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Brookhaven National Laboratory, National Center for Analysis of Energy Systems, Technology Assessment Group

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AVAILABILITY: TIS

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Hafeld, R.
Adam Opel AG

ADDRESS: Germany

"TITLE: Considerations in Redesigning a Gasoline Engine into a Diesel Engine for Passenger Car Service


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SPOKES: Society of Automotive Engineers

KEYWORDS: DIESEL ENGINES; ENGINES; AUTOMOTIVE ENGINEERING; CONVERSION; DIAGNOSIS; AUTOMOBILES; MANUFACTURING; DESIGN

AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15086

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"TITLE: Methanol: Its Synthesis, Use as a Fuel, Economics, and Hazards (Excerpt)


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SPOKES: Energy Research and Development Administration

KEYWORDS: ALTERNATE FUELS; METHANOL; PROPERTIES; EMISSIONS; PRODUCTION; CONSUMPTION; UTILIZATION; COSTS; ECONOMIC ANALYSIS; HAZARDS; BIBLIOGRAPHIES; ENGINES; GASOLINE

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ADDRESS: Redwood City, CA 94063

"TITLE: Energy Requirements for Electric Road Vehicle Propulsion


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SPOKES: National Aeronautics and Space Administration

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AVAILABILITY: TIS

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ADDRESS: Santa Barbara, CA 93105

"TITLE: Electric Car Technology for Demonstration and Development


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KEYWORDS: ELECTRIC VEHICLES; TECHNOLOGY; DEMONSTRATION; DEVELOPMENT; NICKEL-CYCLIC BATTERIES; BATTERIES; LITHIUM-ALUM BAKELITE; SUPPER BATTERIES; LEAD-ACID BATTERIES; PERFORMANCE; GRAPHS (CHARTS); ENERGY CONSUMPTION

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General Research Corp.

ADDRESS: Santa Barbara, CA 93105

"TITLE: Urban Applications and Energy Impacts of Future Electric Cars


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SPOKES: Energy Research and Development Administration, Division of Transportation Energy Conservation

KEYWORDS: URBAN TRANSPORTATION; FORECASTING;
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ADDRESS: Santa Barbara, CA
TITLE: Basic Requirements for Urban Cars

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KEYWORDS: URBAN TRANSPORTATION; AUTOMOBILE DRIVERS; VEHICLE MILES TRAVELED; VEHICLE SINCE; LOS ANGELES; WASHINGTON DC; OWNERSHIP; AGE GROUPS
AVAILABILITY: Society of Automotive Engineers Inc., 450 Commonwealth Drive, Warrendale, PA 15096 $2.50

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General Research Corp. Energy Research and Development Administration
ADDRESS: SRC, Santa Barbara, CA; ENDA, Washington, DC
TITLE: Impacts of Future Use of Electric Cars in U.S. Cities

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AVAILABILITY: Electric Vehicle Council, 99 Park Ave., New York, NY 10016 $1.50

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General Research Corp.
ADDRESS: R.O. Box 3587, Santa Barbara, CA 93105
TITLE: Applicability of Electric Cars

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SPONSOR: U.S. Dept. of Energy
KEYWORDS: AUTOMOBILE DRIVERS; DISTANCE; ELECTRIC VEHICLES; VEHICLE MILES TRAVELED; VEHICLE SINCE; URBAN AREAS; LOS ANGELES; ELECTRICITY COSTS (DATA); GRAPHS (CHARTS); MIGRATIONS; PASSENGER TRANSPORTATION; BATTERIES; BATTERY CHARGING

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TITLE: An Overall Design Approach to Improving Passenger Car Fuel Economy

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AVAILABILITY: Society of Automotive Engineers Inc., 450 Commonwealth Drive, Warrendale, PA 15096 $2.50

Harris, R.G.
California, University of, School of Business Administration
ADDRESS: Berkeley, CA
TITLE: Economics of Traffic Density in the Rail Freight Industry

Rail Journal of Economics, 8(2), 556-564
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KEYWORDS: RAIL TRANSPORTATION; ECONOMICS; TRAFFIC; CARGO TRANSPORTATION; ECONOMIC ANALYSIS; GOVERNMENT POLICIES; RATES (COSTS)

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New York State Dept. of Transportation, Planning Division
ADDRESS: Albany, NY 12223
TITLE: Information Sharing Behavior: A Review of Recent Findings

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SPONSOR: National Academy of Sciences, Transportation Research Board
KEYWORDS: TRANSPORTATION; PLANNING; LINK USE; LOCAL GOVERNMENT; GROWTH; GOVERNMENT POLICIES
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KEYWORDS: RAIL TRANSPORTATION; ECONOMICS; TRAFFIC; CARGO TRANSPORTATION; ECONOMIC ANALYSIS; GOVERNMENT POLICIES; RATES (COSTS)
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New York State Dept. of Transportation, Planning and Research Bureau, Planning Research Unit
ADDRESS: Albany, NY 12232
TITLE: Intercity Passenger Demand Models: State-of-the-Art
SPONSOR: N.Y. Dept. of Transportation, Office of University Research
KEYWORDS: INTERCITY TRANSPORTATION; PASSENGER TRANSPORTATION; DEMAND (ECONOMICS); MODELS

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Commerce, Bureau of Economic Analysis
ADDRESS: CF, 177 Massachusetts Ave., MW, Washington, DC 20036; T.160, Washington DC
TITLE: Energy Conservation Strategies
An issue report, 50 p., 1976
KEYWORDS: ENERGY CONSERVATION; GOVERNMENT POLICIES; PRICES; RATIONING; ALLOCATIONS;
REGULATIONS; INCENTIVES; CONSUMERS; EDUCATION; FUEL CONSUMPTION; ECONOMIC IMPACT;
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Hacket, H.N.; Chang, N.; Howe, R.; Cattell, R.
Engelhard Industries, a Division of Engelhard Chemical Corp.
ADDRESS: Neno Park, Edison, N.J. 08817
TITLE: Durability Testing at One Atmosphere of Advanced Catalysts and Catalyst Supports for
Automotive Gas Turbine Engine Combustors. Part I
Final Report, Report No. CON/9484-1, NASA
C=153532, 223 p., 1979, June
SPONSOR: Energy Research and Development Administration, Division of Transportation
KEYWORDS: TESTING; CATALYSTS; AUTOMOBILES; GAS TURBINE ENGINES; COMBUSTORS; PERFORMANCE;
Emissions; PROPANE; DIESEL FUELS; AUTOMOBILE EMISSIONS; LIFE (DURABILITY); TABLES (DATA);
GRAPH (CHART)
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KEYWORDS: CAUCUSING; AUTOMOBILE DRIVERS; BEHAVIOR; ENERGY CONSERVATION; ATTITUDES;
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Bagli, T.C. (ed.)
TITLE: Modal Choice and the Value of Travel Time
198 p., 1976
KEYWORDS: TABLES (DATA); GRAPHS (CHARTS); TRAFFIC; PLANNING; COST; BEHAVIOR; TRAVEL; COSTS (Vehicles); AIR TRANSPORTATION; TRAVEL TIME

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Stanford Research Institute
ADDRESS: Menlo Park, CA 94025
TITLE: Energy Study of Automated Guideway Transit (AGT) Systems
Final Report, 100 p., 1978, March
SPONSOR: Energy Research and Development Administration
KEYWORDS: ENERGY DEMAND; AIRPORTS; TABLES (DATA); RESEARCH; COST BUDGETS; MAINTENANCE;
OPERATING COSTS; ENERGY CONSERVATION; SERVICES; PASSENGER TRANSPORTATION; ECONOMIC
ANALYSIS; ELECTRIC RAIL SYSTEMS; AUTOMATED GUIDEWAY TRANSIT

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Stanford Research Institute
ADDRESS: Menlo Park, CA 94025
Final Report, 171 p., 1977, August
SPONSOR: Energy Research and Development Administration
KEYWORDS: PASSENGER TRANSPORTATION; ENERGY DEMAND; RAIL TRANSPORTATION; TECHNICAL
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Hovey, R.C.; Boden, C.B.
Jet Propulsion Laboratory
ADDRESS: 4800 Oak Grove Drive, Pasadena, CA
TITLE: Costs and Energy Efficiency of a Dual-mode System
Report No. RS-77-0002, NASA CR-154251,
ADVISORY BOARD: 06-06-887-76-1, 76 p., 1977, April
SPONSOR: NASA
KEYWORDS: ENERGY CONSUMPTION; TRANSPORTATION; PROPULSION; SYSTEMS ANALYSIS;
ELECTRIC VEHICLES; LIFE-CYCLE COST;
COMPETITIVE EVALUATION; OWNERS; HYBRID ELECTRIC-POWERED VEHICLES
AVAILABILITY: NTIS

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New York State Dept. of Transportation, Planning and Research Bureau, Planning Research Unit
ADDRESS: Albany, NY 12232
TITLE: Intercity Passenger Demand Models: State-of-the-Art
SPONSOR: N.Y. Dept. of Transportation, Office of University Research
KEYWORDS: INTERCITY TRANSPORTATION; PASSENGER TRANSPORTATION; DEMAND (ECONOMICS); MODELS

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TITLE: Modal Choice and the Value of Travel Time
198 p., 1976
KEYWORDS: TABLES (DATA); GRAPHS (CHARTS); TRAFFIC; PLANNING; COST; BEHAVIOR; TRAVEL; COSTS (Vehicles); AIR TRANSPORTATION; TRAVEL TIME

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Henderson, C.; Cronin, E.N.; Ellis, E.T.
Stanford Research Institute
ADDRESS: Menlo Park, CA 94025
TITLE: Energy Study of Automated Guideway Transit (AGT) Systems
Final Report, 100 p., 1978, March
SPONSOR: Energy Research and Development Administration
KEYWORDS: ENERGY DEMAND; AIRPORTS; TABLES (DATA); RESEARCH; COST BUDGETS; MAINTENANCE;
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Stanford Research Institute
ADDRESS: Menlo Park, CA 94025
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SPONSOR: Energy Research and Development Administration
KEYWORDS: PASSENGER TRANSPORTATION; ENERGY DEMAND; RAIL TRANSPORTATION; TECHNICAL
ANALYSIS; TABLES (DATA); NETWORK TRANSIT; RESEARCH; HISTORY; EQUIPMENT; SERVICES; ENERGY INTENSITY

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Jet Propulsion Laboratory
ADDRESS: 4800 Oak Grove Drive, Pasadena, CA
TITLE: Costs and Energy Efficiency of a Dual-mode System
Report No. RS-77-0002, NASA CR-154251,
ADVISORY BOARD: 06-06-887-76-1, 76 p., 1977, April
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Paper published in Transportation Research Record 487, 30-31
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SPONSOR: National Academy of Sciences, Transportation Research Board
KEYWORDS: RESEARCH; TRAVEL TIME; MOBILITY; VEHICLE TRIPS
AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave., NW, Washington, DC 20418
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KEYWORDS: RESEARCH; TRAVEL TIME; MOBILITY; VEHICLE TRIPS
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ADDRESS: Pasadena, CA 91109
TITLE: Caltech Seminar Series on Energy Consumption in Private Transportation: An Analytical Survey
Report No. PB-235349, DOT-TST-75-6, 28 p.
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SPONSOR: U.S. Dept. of Transportation
KEYWORDS: CONFERENCE; TRANSPORTATION; ENERGY CONSUMPTION; AUTOMOBILES; MASS TRANSPORTATION
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AVAILABILITY: NTIS

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Southern California Association of Governments
TITLIE: Planning for the Automobile in the SCAG Region: An Evaluation of Alternatives for Reducing Automobile Emissions and Fuel Consumption
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Teledyne Continental Motors, General Products Division
ADDRESS: 76 Getty Street, Waseca, MN 56093
TITLE: Automotive Diesel Technology Program: Final Report, Period June 1975-April 1977
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SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation
AVAILABILITY: DOE

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Teledyne Continental Motors, General Products Division

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Mobil Research and Development Corp.
ADDRESS: 400 Commonwealth Drive, Warrendale, PA 15096
TITLE: A Low NOX (x) Lightweight Car Diesel Engine
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AVAILABILITY: Society of Automotive Engineers, 400 Commonwealth Avenue, Warrendale, PA 15096

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Aerospace Corp., Environment and Energy Conservation Division
ADDRESS: El Segundo, CA 90245
TITLE: Survey of Driver Aid Devices for Improved Fuel Economy
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SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Systems Development and Technology, Office of Systems Engineering, U.S. Dept. of Transportation, Transportation Systems Center
AVAILABILITY: NTIS

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ADDRESS: Columbus, OH 43245
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SPONSOR: Energy Research and Development Administration, Division of Transportation Energy Conservation
KEYWORDS: HIGHWAY TRANSPORTATION: ENERGY
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Notowitz, A.D.; Sheth, J.N.
General Motors Corp., Research Laboratories, Advanced Analysis Dept., Illinois, University of, Dept. of Business Administration
ADDRESS: O.C., Warren, MI 48090; O.L., Urbana, IL 61801
TITLE: Ridesharing to Work: A Psychosocial Analysis
1977, January 11
KEYWORDS: COMPUTING; CARPOOLS; MATHEMATICAL MODELS; CHICAGO; BEHAVIOR; ATTITUDES; TRAVEL TRENDS; QUESTIONNAIRES; DEMOGRAPHY; TESTING; MARKETING; SURVEYS; TABLES (DATA); GRAPHS (CHARTS); ILLINOIS

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ADDRESS: Washington, DC
TITLE: An Aggregate Supply Model for Urban Bus Transit (abridgment)
Paper published in Transportation Research Record 626, 12-15
1977
SPONSOR: National Academy of Sciences, Transportation Research Board
KEYWORDS: ENVIRONMENTAL MODELS; URBAN TRANSPORTATION; CAPACITY; AUTOMOBILES; VEHICLE TRIPS; LOS ANGELES
AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418
R.20 for Transportation Research Record 626

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ADDRESS: Berkeley, CA
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KEYWORDS: GOVERNMENT POLICIES; RESEARCH; FUNDING; TECHNOLOGY ASSESSMENT; DEVELOPMENT; TESTING; COMMERCIALIZATION; INSTITUTIONAL FACTORS; COMMERCIAL SECTOR
AVAILABILITY: Westview Press, Boulder, CO

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Oak Ridge National Laboratory, Information Division, Information Center Complex, Energy Information Center
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Report No. ORNL/IES-114 (Part II of ORNL-5320), 272 p.
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AVAILABILITY: NTIS

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Hubbard, H.L.; Kelly, J.J.; Knight, C.N.
Oak Ridge T-12 Plant
ADDRESS: P.O. Box T, Oak Ridge, TN 37830
TITLE: Composite Flywheel Development (January 1 - March 31, 1977)
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SPONSOR: Energy Research and Development Administration, Office of Commissariat, Division of Energy Storage Systems, Advanced Physical Methods Branch
KEYWORDS: FLYWHEELS; RESEARCH; TECHNOLOGY; DESIGN; GRAPHS (TABLES); MATERIALS; STRESS ANALYSIS; HYDRO ELECTRICAL-Powered VEHICLES
AVAILABILITY: NTIS

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ADDRESS: P.O. Box T, Oak Ridge, TN 37830
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KEYWORDS: FLYWHEELS; RESEARCH; TECHNOLOGY; DIAGNOSIS; GRAPHS (TABLES); DESIGN; TESTING; STRESS ANALYSIS
AVAILABILITY: NTIS

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Pittsburgh, University of, Environmental Systems Engineering
ADDRESS: Pittsburgh, PA 15260
TTLI: Toyota Rotor

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KEYWORDS: FORECASTING; AUTOMOBILES; OWNERSHIP; LIFE STYLE; POPULATION (STATISTICS); AGE GROUPS; TABLES (DATA); VEHICLE TRIPS; VEHICLE MILES TRAVELED; MODELS

1977, July

KEYWORDS: AUTOMOBILES; OWNERSHIP; MODELS; FORECASTING; VEHICLE TRIPS; VEHICLE MILES TRAVELED; TABLES (DATA); AGE GROUPS; REGIONAL ANALYSIS; GRAPHS (CHARTS); LIFE STYLE

1977, July

KEYWORDS: AUTOMOBILES; OWNERSHIP; MODELS; FORECASTING; VEHICLE TRIPS; VEHICLE MILES TRAVELED; TABLES (DATA); AGE GROUPS; REGIONAL ANALYSIS; GRAPHS (CHARTS); LIFE STYLE

PAPER presented at the Fourth International Electric Vehicle Symposium, held in Dusseldorf, Germany, August 31 - September 2, 1976, 17 p.
1976, September

KEYWORDS: DEVELOPMENT; ELECTRIC VEHICLES; TABLES (DATA); GRAPHS (CHARTS); ENERGY CONSUMPTION; LEAD-ACID BATTERIES; AUTOMOBILES; TRUCKS; COMPARATIVE EVALUATIONS; ENERGY CONSERVATION; PERFORMANCE

AVAILABILITY: Electric Vehicle Council, 90 Park Ave., New York, NY 10016 $1.50

International Road Federation
ADDRESS: 1229 Washington Building, Washington, DC

Annual publication 1975

KEYWORDS: STATISTICS; ROADS; TABLES (DATA); PRODUCTION; EXPORTS; VEHICLES; INTERNATIONAL TRADE; VEHICLE REGISTRATIONS; IMPORTS; TRAFFIC; AUTOMOTIVE FUELS

Interstate Commerce Commission
ADDRESS: Washington, DC

1978

KEYWORDS: TRANSPORTATION; REGULATIONS; CONSUMERS; PROTECTION; RAIL TRANSPORTATION; CARGO TRANSPORTATION; PIPELINE TRANSPORTATION; TARIFFS; WATER TRANSPORTATION; LEGISLATION; FINANCIAL DATA; FINANCIAL MANAGEMENT

AVAILABILITY: GPO, Stock No. 026-000-01096-9

Interstate Commerce Commission
ADDRESS: Washington, DC

97 p.

KEYWORDS: COMMODITIES; REGIONAL ANALYSIS; TABLES (DATA); CARGO TRANSPORTATION; REVENUES; TARIFFS; TRUCKS; STATISTICS; WEIGHT

AVAILABILITY: GPO $1.75, Stock No. 026-000-01054-3, Catalog No. IC 1-R0722:1978

Interstate Commerce Commission
ADDRESS: Washington, DC

Annual report, 59 p.

KEYWORDS: TABLES (DATA); WATERWAY TRANSPORTATION; REVENUES; WATER TRANSPORTATION; CARGO TRANSPORTATION; PASSENGER TRANSPORTATION; FINANCIAL DATA; REGIONAL ANALYSIS; OPERATING COSTS; MARINE TRANSPORTATION; COMMODITIES; Tonnage

AVAILABILITY: GPO, Stock No. 026-000-0069-1
Transportation: Regional Transportation

Irwin, P.C.; Fasch, R.P.
National Academy of Sciences, National Research Council, Transportation Research Board, TRISNET Secretariat
Address: 3105 Constitution Ave., Washington, DC 20590
Title: TRISNET: Directory to Transportation Research Information Resources
1976, May
Sponsor: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Systems Development and Technology, Transportation Research Activity Information Service
Keywords: DIRECTORY; TRANSPORTATION; HIGHWAY TRANSPORTATION; URBAN TRANSPORTATION; DATA Bases; PUBLIC TRANSPORTATION; ENVIRONMENTAL QUALITY; INFORMATION; INFORMATION SYSTEMS
Availability: NTS

Irving-Cloud Publishing Co.
Address: 7300 W. Cicero Ave., Lincolnwood, IL 60646
Title: An Analysis of Marketing Trends in the Automotive Service Industry Through 1975
V.P.
1975, December
Keywords: MARKETING; AUTOMOTIVE INDUSTRY; SERVICES; TABLES (DATA); STATISTICS; CAROLINE; MAINTENANCE; SALES; EMPLOYMENT; FINANCIAL DATA; REPAIR; AUTOMOBILES

Janicki, K.
Title: The Diesels Are Coming
California Highway Patrolmen, 41(11), 18, 58
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Keywords: DIESEL ENGINES; AUTOMOBILES; FUEL; ECONOMY; COMPARATIVE EVALUATIONS; DISCHARGES; IGNITION SYSTEMS; COMPRESSION; FUEL INJECTION SYSTEMS; PRECOMBUSTION CHAMBERS; PUBLIC OPINION

Jelavich, M.S.; Pence (Jack) Associates Inc.
Address: 5454 Wisconsin Avenue, Suite 1150, Chevy Chase, MD 20015
Title: A Study of the Determinants of Freight Model Choice
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Sponsor: U.S. Dept. of Energy, Division of Transportation Energy Conservation
Keywords: CAR TRANSPORTATION; DECISIONS; WEIGHT; INPUT-OUTPUT ANALYSIS; COMMODITIES; FORECASTING; MODELS; RATES (COSTS); DISTANCE; DETERMINANTS
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TITL: Computer Simulations of Emissions and Fuel Economy
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KEYWORDS: AUTOMOTIVE EMISSIONS; FUEL ECONOMY; COMPUTERIZED SIMULATION; SPECIFIC STANDARDS; AUTOMOBILES; DESIGN; GRAPHIC CHARTS
AVAILABILITY: Society of Automotive Engineers Inc., 499 Commonwealth Drive, Warrendale, PA 15086 $2.50

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Kalish, Wittlinger and Associates Inc.
TITL: The Potential Market for On-the-Road Electric Vehicles
22 p.
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SPONSOR: Electric Vehicle Council; Copper Development Association Inc.
KEYWORDS: MARKET; ELECTRIC VEHICLES; PERFORMANCE; STRUCTURAL DESIGN; TECHNOLOGY; AUTOMOBILES; BUSES (VEHICLES); INTERNAL COMBUSTION ENGINES; COHAPRATORY EVALUATIONS; TABLES (DATA)
AVAILABILITY: Electric Vehicle Council, 90 Park Avenue, New York, NY 10016

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Kaplan, J.A.
U.S. Dept. of Transportation, Federal Highway Administration
ADDRESS: 490 7th St. SW, Washington, DC 20590
TITL: Characteristics of the Popular Adult Bicycle User
1975, July
KEYWORDS: BICYCLES; ACCIDENTS; SURVEYS; DEMOGRAPHIC SURVEYS; VEHICLE SURVEYS; AGE
AVAILABILITY: NYS

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ADDRESS: Japan
TITL: "The Efficiency Improvement of Electric Vehicles by Regenerative Braking"
1978
KEYWORDS: ELECTRIC VEHICLES; REGENERATIVE BRAKING; DESIGN; EFFICIENCY; ELECTRIC VEHICLE DATA; GRAPHIC CHARTS
AVAILABILITY: Society of Automotive Engineers Inc., 499 Commonwealth Drive, Warrendale, PA 15086 $2.50

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ADDRESS: 100 S. Wacker Drive, Chicago, IL 60606
TITL: Energy Efficiency Improvement Targets in the Transportation Equipment Industry (SIC 371). Volume 1
1976, July 12
SPONSOR: Federal Energy Administration, Office of Industrial Reporting Programs
KEYWORDS: EFFICIENT TRANSPORTATION EQUIPMENT: ENERGY CONSUMPTION; EFFICIENT CONSERVATION; INDUSTRIAL SECTOR; GOVERNMENT POLICIES; ECONOMICS: TABLES (DATA); MODELING; REGIONAL ANALYSIS: STATISTICS; OPERATING COSTS; VEHICLES; AIRCRAFT; BOATS; BUSES; RAIL TRANSPORTATION; MOTORCYCLES; BICYCLES; RECREATION VEHICLES
AVAILABILITY: NYS

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Kearney (A.T.I) Inc.
ADDRESS: 100 South Wacker Drive, Chicago, IL 60606
TITL: The Goods Movement Demonstration Project Design Phases I and II. Executive Summary
Report No. PB-258854, EPA-IL-06-003-6-0, 60 p.
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SPONSOR: U.S. Dept. of Transportation, Urban Mass Transportation Administration
KEYWORDS: CARGO TRANSPORTATION; AIR POLLUTION; VEHICLE POLLUTION; ENERGY CONSUMPTION; COSTS; TABLES (DATA); TRANSPORTATION; COMPARATIVE EVALUATIONS; FUEL CONSUMPTION; TRUCKS; TRAFFIC; LAND USE; PASSENGER TRANSPORTATION; URBAN TRANSPORTATION; COMMUNITIES
AVAILABILITY: NYS

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Trentacoste, R.T.
New York State Dept. of Transportation, Planning Division
ADDRESS: Albany, NY 12223
TITL: Changes in Individual Travel Behavior During the Energy Crisis, 1973-74
1974, August
SPONSOR: U.S. Dept. of Transportation
KEYWORDS: ENERGY CONSERVATION; TRAVEL BEHAVIOR; GASOLINE; CARPOOLING; NEW YORK: URBAN TRANSPORTATION; SHORTAGES; VEHICLE REGISTRATIONS; ATTITUDES; AUTOMOBILE DRIVERS; SURVEYS; QUESTIONNAIRES; RESIDENTIAL SECTOR; TABLES (DATA); FUEL ECONOMY; FUEL CONSUMPTION: PURCHASING: DEMAND (ECONOMICS)

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Keller, J.L.; Nakaguchi, G.H.; Pare, J.C.
Union Oil Co. of California, Research Dept.
ADDRESS: Brea, CA
TITL: "Ethanol Fuel Modification for Highway Vehicles" Final Report
1976, July
SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation
KEYWORDS: METHANOL; ALTERNATE FUELS; ALCOHOL FUELS; ENGINE; MODIFICATIONS; GASOLINE; PROPERTIES; VEHICLES; UTILIZATION; PERFORMANCE; ENVIRONMENTAL IMPACT; TRANSPORTATION; WATER; TESTING; TABLES (DATA); TOXICITY; SAFETY
AVAILABILITY: NYS
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Knight, L.W.; Stover, R.R.

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Koos, R.

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Koppelman, F.; O'Sullivan, F.; Collins, T.

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Kraft, W.R.; Deutchman, H.

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Kraus, R.F.

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Kulash, R.J.; Hodge, R.R.; Pfeifer, D.

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Kleiner, L. (ed.)

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12. L. J. (64.)
   Argonne National Laboratory, Energy and
   Environmental Systems Division
   ADDRESS: 9700 South Campus Avenue, Argonne, IL
   60439
   TITLE: Transportation Energy Conservation: Tools to
   Meet the National Objective
   Report No. ANL-76-112-1, paper prepared for a
   symposium on United States Lithium Resources
   and Requirements by the Year 2000, Lakeview,
   1976
   SPONSOR: Energy Research and Development
   Administration, Assistant Administrator for
   Conservation
   KEYWORDS: US ENR; HEAT STORAGE; BATTERIES;
   ELECTRIC VEHICLES; LITHIUM-ALUMINUM/NON
   METAL BATTERIES; RESEARCH PROGRAMS;
   USE OF DC UTILITIES; ELECTRIC POWER;
   TRANSPORTATION
   AVAILABILITY: NTIS

13. Leard, A.
   U.S. Dept. of Transportation, Transportation
   Systems Center
   ADDRESS: Kendall Square, Cambridge, MA 02142
   TITLE: Methanol as an Automotive Fuel with
   Special Emphasis on Methanol-Gasoline Blends
   Report No. DOT-EHC-077-77-31, R.P.
   1977, April
   SPONSOR: U.S. Dept. of Transportation, Office of
   the Assistant Secretary for Systems
   Development and Technology, Office of Systems
   Engineering
   KEYWORDS: METHANOL; AUTOMOTIVE FUELS; GASOLINE;
   TITING; PRODUCTION; COSTS; ALTERNATE FUELS;
   RESEARCH
   AVAILABILITY: NTIS

   National Academy of Sciences, National Research
   Council, Transportation Research Board
   ADDRESS: 2101 Constitution Avenue NW, Washington,
   DC 20410
   TITLE: Rail Transit
   Transportation Research Record 645, 31 p.
   1977
   KEYWORDS: RAIL TRANSPORTATION; RAIL ROAD;
   STATION; FARES; FARES; FARES; FARES;
   AVAILABILITY: National Academy of Sciences,
   Transportation Research Board, 2101
   Constitution Avenue NW, Washington, DC 20410
   $2.20

15. Lepes, D. M.; Hinton, W. C.; Felker, J.; Yura, T.
   Aerospace Corp., Environmental Programs Group
   ADDRESS: El Segundo, CA 90245
   TITLE: Current Status of Alternative Automotive
   Power Systems and Fuels. Volume 1-a
   Report No. EPA-460/3-76-013-a
   1976, July
   SPONSOR: U.S. Environmental Protection Agency,
   Office of Air and Waste Management, Office of
   Mobile Source Air Pollution Control, Alternative
   Automotive Power Systems Division
   KEYWORDS: ALTERNATIVE POWER SOURCES; AUTOMOTIVE
   FUELS; ELECTRIC VEHICLES; RESEARCH; TABLES (DATA);
   DIAGRAMS; HISTOGRAMS; AUTOMOTIVE FUELS;
   ELECTRIC-POWERED VEHICLES; GRAPHS (CHARTS);
   TRANSPORTATION
   AVAILABILITY: NTIS

16. Large, D. B.
   TITLE: Hidden Waste
   1976
   KEYWORDS: ENERGY CONSERVATION; ELECTRIC POWER;
   GENERATION; ENVIRONMENTAL IMPACT; ENERGY
   SOURCES; RESIDENTIAL SECTOR; HVAC; FUELS;
   HEATING SYSTEMS; COSTS; SOLAR SPACE HEATING;
   AIR CONDITIONING; ENERGY CONSUMPTION;
   APPLIANCES; EFFICIENCY; COMMERCIAL BUILDINGS;
   AUTOMOBILES; MANUFACTURING; PRODUCTION;
   INDUSTRIAL SECTOR; TRANSPORTATION;
   TRANSPORTATION; PETROLEUM; CARGO
   TRANSPORTATION; PASSENGER TRANSPORTATION;
   FOOD INDUSTRY; TRANSPORTATION
   AVAILABILITY: The Conservation Foundation, 1317
   Massachusetts Ave NW, Washington, DC 20036

17. Laughlin, G. B.
   National Governors' Association, Center for
   Policy Research
   ADDRESS: 444 North Capitol Street, Washington, DC
   20001
   TITLE: Energy Conservation: The State of the
   States
   1978, February
   SPONSOR: U.S. Dept. of Energy, Office of
   Intergovernmental Affairs
   KEYWORDS: ENERGY CONSERVATION; STATE ANALYSIS;
   GOVERNMENT POLICIES; STATE GOVERNMENT;
   BUILDING STANDARDS; GUIDELINES; BUILDINGS;
   STANDARDS; TAXES (DATA); HEATING EFFICIENCY;
   TRANSPORTATION; RESIDENTIAL SECTOR;
   INDUSTRIAL SECTOR; PUBLIC BUILDINGS; BUILDING CODES
COWT.

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KEYWORDS: FLYWEIGHTS; ENERGY STORAGE; DIAGRAMS; GRAPHS (CHARTS); ELECTRIC VEHICLES; TESTING; MODELS; ROBOTS; DRAWINGS; SHAPES; YEAR

AVAILABILITY: NTS

Lomestoff, E.W.

Portable Pacific Northwest Laboratories

ADDRESS: Richland, WA 99352

TITLE: Flywheel/Heat Engine Power for an Energy-Economic Personal Vehicle


1976, March

SPONSOR: Energy Research and Development Administration

KEYWORDS: FLYWEIGHTS; AUTOMOBILES; HEAT ENGINES; ENERGY CONSERVATION: TABLES (DATA); FUEL ECONOMY; DESIGN

AVAILABILITY: NTS

Lowry, J.H.

Princeton University, Dept. of Civil Engineering

ADDRESS: Princeton, N.J.

TITLE: Energy Savings for Work Trips: Analysis of Alternative Commuting Patterns for New Jersey

REPORT PRESENTED AT THE 52ND ANNUAL MEETING OF THE TRANSPORTATION RESEARCH BOARD, PUBLISHED IN TRANSPORTATION RESEARCH RECORD 561, 23-36

1976

KEYWORDS: ENERGY CONSERVATION: TIME-SAVING; NEW JERSEY: RAPID TRANSIT: COMPARATIVE EVALUATIONS; ENERGY CONSERVATION: GOVERNMENT POLICIES; AUTOMOBILES: FUEL ECONOMY; AUTOMOBILE OCCUPANCY: MODELS; CARPOOLING; TRANSPORTATION

AVAILABILITY: NATIONAL ACADEMY OF SCIENCES, TRANSPORTATION RESEARCH RECORD BOARD, 2101 CONSTITUTION AVE., NW, WASHINGTON, DC 20401 $5.00 FOR TRANSPORTATION RESEARCH RECORD 561

Maio, D.J.: Wang, G.M.: Walter, N.

U.S. Dept. of Transportation, Transportation Systems Center

ADDRESS: Kendall Square, Cambridge, MA 02142

TITLE: Forecasting Models for Air Freight Demand and Protection of Cargo Activity at U.S. Airports

REPORT NO. FAA-AP-77-2, 175 P.

1977, January

SPONSOR: U.S. Dept. of Transportation, Federal Aviation Administration, Office of Aviation Policy

KEYWORDS: FORECASTING; MODELS; CARGO TRANSPORTATION: AIRLINE; AIRPORTS: ECONOMIC MODELS; PASSENGER ENVELOPMENTS: TABLES (DATA): PASSENGER TRANSPORTATION; GRAPHS (CHARTS): INTERNATIONAL TRAVEL; DEMAND (ECONOMIC)

AVAILABILITY: NTS

Mabry, K.R.: Jones, P.S.

Georgia Institute of Technology

TITLE: Priority Analysis Procedure for Ranking Highway Improvement Projects

REPORT PRESENTED AT THE 52ND ANNUAL MEETING OF THE TRANSPORTATION RESEARCH BOARD, PUBLISHED IN TRANSPORTATION RESEARCH RECORD 565, 35-48

1976

KEYWORDS: HIGHWAYS: CONSTRUCTION: PLANNING: STATE GOVERNMENT; QUESTIONNAIRES

AVAILABILITY: NATIONAL ACADEMY OF SCIENCES, TRANSPORTATION RESEARCH BOARD, 2101 CONSTITUTION AVE., NW, WASHINGTON, DC 20401 $3.60 FOR TRANSPORTATION RESEARCH RECORD 565

Vallieris, A.C.: Hafl, A.; Gould, N.R.

U.S. Dept. of Transportation

ADDRESS: Washington, DC

TITLE: Concise Description of Auto Fuel Economy and Performance in Recent Model Years


1976

SPONSOR: SOCIETY OF AUTOMOTIVE ENGINEERS


AVAILABILITY: SOCIETY OF AUTOMOTIVE ENGINEERS INC., 490 COMMONWEALTH DRIVE, WARSAW, PA 15096 $2.75

Handelker, D.R.: Stapper, H.A.

Washington University, School of Law

ADDRESS: Seattle, WA 98105

TITLE: New Frontiers for Land Development Controls

PAPER PRESENTED AT THE 52ND ANNUAL MEETING OF THE TRANSPORTATION RESEARCH BOARD, PUBLISHED IN TRANSPORTATION RESEARCH RECORD 565, 6-11

1976

SPONSOR: NATIONAL ACADEMY OF SCIENCES, TRANSPORTATION RESEARCH BOARD

KEYWORDS: LAND DEVELOPMENT: POLLUTION REGULATIONS: TRANSPORTATION SYSTEMS: AIR POLLUTION: GOVERNMENT POLICIES

AVAILABILITY: NATIONAL ACADEMY OF SCIENCES, TRANSPORTATION RESEARCH BOARD, 2101 CONSTITUTION AVE., NW, WASHINGTON, DC 20401 $6.00 FOR TRANSPORTATION RESEARCH RECORD NO. 565

Marcus, L.

Technical Technology Inc.

ADDRESS: 988 ALBANY-SHAKER ROAD, LATHAM, NY


REPORT NO. C00/2835-3, V.P.

1977, November

SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation


AVAILABILITY: NTS
Characterization of the 1975 Ford 160-CID Automotive Engine—Experimental Data

Sponsor: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for System Development and Technology, Office of Systems Engineering; U.S. Dept. of Transportation, Transportation Systems Center, Power and Propulsion Branch
Keywords: Fuel Consumption; Automotive Emissions; Internal Combustion Engines; Performance; Testing; Carbon Monoxide; Hydrocarbons; Oxides; Testing; Graphs (Charts); Tables (Data)
Availability: NBS

Narex, C. Jr.: Nabees, N.
Vehicular Materials Co.

Paper published in Transportation Research Board Special Report 166, 18-28 1976
Keywords: Construction; Materials; Transportation; Newspapers; Reports; Introduction; Tables (Data); Graphs (Charts)
Availability: National Academy of Sciences, National Research Council, Transportation Research Board, 201 Constitution Ave, NW, Washington, DC 20418 $6.00 for the Special Report 166

Narex, Marketing Committee

Title: State Boat Registration 1967 - 1975
24 p.
Keywords: Boat; Vehicle Registrations; Materials; Tables (Data); State

Narish, N.M.; Stasup, N.R.
Energy Research and Development Administration, Battelle Energy Research Center

Address: P.O. Box 1389, Battelleville, OH 43003
Title: Fuel Consumption, Emissions, and Power Characterization of the 1975 Ford 160-CID Automotive Engine—Experimental Data
Sponsor: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for System Development and Technology, Office of Systems Engineering; U.S. Dept. of Transportation, Transportation Systems Center, Power and Propulsion Branch
Keywords: Fuel Consumption; Automotive Emissions; Internal Combustion Engines; Performance; Testing; Carbon Monoxide; Hydrocarbons; Oxides; Graphs (Charts); Tables (Data)
Availability: NBS

Hart, W.A.
Washington University, St. Louis, MO

Title: A General Purpose Flight Simulation Program—Proposed Hardware and Software

Report No. NASA TN D-7995, 47 p. 1968, April
Sponsor: NASA
Keywords: Flight Simulation; Hardware; Software; GIMBAL; PERFORMANCE; OPTIMIZATION; MODELING; MACHINES; RESEARCH
Availability: NBS

Narveson, H.T., Jr.; Nabees, P.S.
General Motors Corp., Research Laboratories, Flint, Michigan Research Dept.

Address: Flint, MI 48500
Title: The Drag Related Flow Field Characterization of Trucks and Buses

1977, August
Keywords: Trucks; Buses (Vehicles); Aerodynamics; Design; Size; Drag; Trailers; Diagrams;

Narex, C.; Jones, T.B.
Vehicular Materials Co.

Title: Is There a Materials Crisis?

Paper published in Transportation Research Board Special Report 166, 18-28 1976
Keywords: Construction; Materials; Transportation; Newspapers; Reports; Introduction; Tables (Data); Graphs (Charts)
Availability: National Academy of Sciences, National Research Council, Transportation Research Board, 201 Constitution Ave, NW, Washington, DC 20418 $6.00 for the Special Report 166

Narex, Marketing Committee

Title: State Boat Registration 1967 - 1975
24 p.
Keywords: Boat; Vehicle Registrations; Materials; Tables (Data); State

Narish, N.M.; Stasup, N.R.
Energy Research and Development Administration, Battelle Energy Research Center

Address: P.O. Box 1389, Battelleville, OH 43003
Title: Fuel Consumption, Emissions, and Power
<396>
<396> CONT. PHOTOGRAPHS

(397)

Varzilas, B. E. (compiler); Robley, E. P. (ed.)
General Motors Corp., Research Laboratories, Libray, System on Automotive Safety
Information
ADDRESS: Warren, MI 48090
TITLE: Electric Vehicles, 1890-1966: A
Bibliography
1977, May 13
KEYWORDS: ELECTRIC VEHICLES; BIBLIOGRAPHIES;
HISTORY; AUTOMOBILES; HOSES (VEHICLES);
TAICANS; TRUCKS; EQUIPMENT; BATTERIES

(398)

McCarthy, K. F.: Morrison, P.A.
Rand Corp.
ADDRESS: 7200 Main Street, Santa Monica, CA 90406
TITLE: The Changing Demographic and Economic
Structure of Nonmetropolitan Areas in the 1970's
REPORT NO. P-5067, earlier version given at
Annual Meeting of Population Association of America, April, 1977, St. Louis, Missouri, 51
1978, January
KEYWORDS: POPULATION GROWTH; DEMOGRAPHY; URBAN
DEVELOPMENT; RURAL AREAS; RECREATION; FAMILY
LIFE; MANUFACTURING; EMPLOYMENT; REGIONAL
ANALYSIS; POPULATION MIGRATION; STATE
GOVERNMENTS; TABLES (DATA); ECONOMIC
CONDITIONS; ISOME: MAPS; TRANSPORTATION;
COMPUTING; GRAPHS (CHARTS); LIFE STYLE;
SOCIO-ECONOMIC FACTORS

(399)

McDillrvny, B. G.
Urban Institute
ADDRESS: 2100 M Street NW, Washington, DC 20037
TITLE: Gasoline Use by Automobiles
Paper presented at the 5th Annual Meeting of the
Transportation Research Board, held in Transportation Research Record 561, entitled
Transportation Energy Conservation and
Demand, 1976, 65-86
1976
SPONSOR: National Academy of Sciences,
Transportation Research Board
KEYWORDS: GASOLINE; CONSUMPTION; AUTOMOBILES;
TRANSPORTATION; DEFICIAL (ECONOMICS); VEHICLES;
AUTOMOBILES; TRANSPORTATION; RECREATION,
CONSUMPTION; COSTS; TABLES (DATA); FORECASTING; DEFICIT
(ECONOMICS); MATHEMATICAL MODELS; PASSENGER
TRANSPORTATION; OWNERS; MARKET; PRICES;
ECONOMICS

(400)

McGraw-Hill Publications Co., Research Division
ADDRESS: 1221 Avenue of the Americas, New York,
NY 10020
TITLE: Fleet Owner Fuels and Lubricants Survey
1978, February
KEYWORDS: SURVEYS: MOTOR VEHICLES; LUBRICANTS;
DECREASE, FUELS: FUEL PRICES; QUESTIONNAIRES;
MAINTENANCE; FUEL CONSUMPTION; TRUCKS; TABLES
(DATA); GASOLINE; FUEL STORAGE
AVAILABILITY: $12.00

(401)

McHale, J.
Texas, University of
ADDRESS: Austin, TX
TITLE: The Energy Crisis: Fact or Fiction
Paper published in Transportation Research Board
Special Report 166, 5-9
1976
KEYWORDS: ENERGY SHORTAGES; IMPORTS; ENERGY
CONSUMPTION; PRODUCTION; PETROLEUM; NATURAL
GAS; COAL; ENERGY DEMAND; RESERVES; ENERGY
SOURCES; GRAPHS (CHARTS)
AVAILABILITY: National Academy of Sciences,
National Research Council, Transportation
Research Board, 2101 Constitution Ave. NW,
Washington, DC 20418 $6.00 for TRB Special
Report 166

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McLean, A. F.: Baker, M.A.
Ford Motor Co.
ADDRESS: Dearborn, MI 48121
TITLE: Brittle Material Design, High Temperature
Gas Turbine, Volume 2: Ceramic Turbine
Rotor Technology
REPORT NO. AMRC TA 78-14, DA-09 4733, 12th
Annual Report for the Period January -
September, 1977, 93 p.
1978, March
SPONSOR: U.S. Dept. of Defense, Materials
Science and Mechanics Research Center; U.S. Dept. of
Energy, Division of Transportation Energy
Conservation
KEYWORDS: MATERIALS; DESIGN; GAS TURBINES;
CHEMISTRY; ROTORS; TECHNOLOGY; HIGH
TEMPERATURE; BRITTLENESS; FABRICATION;
SILENT NITRIDE; TESTING; COMPUTER PROGRAMS;
TABLES (DATA); GAS TURBINE ENGINES; SILICON
CARRIERS; MECHANICAL PROPERTIES; PHOTOGRAPHS;
DIAGRAMS
AVAILABILITY: NTS

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McHale, B.: Flirkey, D.; Dulla, R.
U.S. Dept. of Energy; Energy and Environmental
Analysis Inc.
TITLE: Passenger Car Classification Using
Interior Volume: A 1978 Op-Date
Paper No. 780133, presented at the Society of
Automotive Engineers' Congress and
Exposition, Cobo Hall, Detroit, Michigan,
1978
SPONSOR: AUTOMOBILES; CLASSIFICATIONS; VOLUMES;
SIZE; WEIGHT; FUEL ECONOMY; DESIGN; PASSENGER
TRANSPORTATION; TABLES (DATA)
AVAILABILITY: Society of Automotive Engineers
Inc., 400 Commonwealth Drive, Warrendale, PA
15086  $2.50

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McHale, B.: Flirkey, D.; Dulla, R.; Miller, C.
U.S. Dept. of Energy; Energy and Environmental
Analysis Inc.
TITLE: A Comparison of Fuel Economy Results from
EPA Tests and Actual In-Use Experience,
1974-1977 Model Year Cars
Paper No. 780037, presented at the Society of
Automotive Engineers' Congress and
<406> COPT.
1978
KEYWORDS: FUEL ECONOMY; AUTOMOBILES: TESTING; COMPARATIVE EVALUATION; ENVIRONMENTAL PROTECTION AGENCY; U.S. DEP. OF HESLAGE:
OPERATION; REFERENCE CIRCLE; DATA ACQUISITION; MANUFACTURERS; CLASSIFICATIONS; GRAPHS (CHARTS)
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096 $2.50

<405> Hecott, R.S.; Pitkey, D.; Dalla, R.
Federal Energy Administration
ADDRESS: Washington, DC
TITLE: Development of a System of Comparable Car Classes for Fuel Economy Labeling
1976
SPONSOR: Society of Automotive Engineers
KEYWORDS: AUTOMOBILES; FUEL ECONOMY; COMPARATIVE EVALUATIONS; CLASSIFICATIONS; TABLES (DATA); PUBLIC OPINION; CONSUMER PRICES; PERFORMANCE; GRAPHS (CHARTS); ENVIRONMENTAL PROTECTION AGENCY; SIZE
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096

<406> Neid, W.J.; Pope, G.W.; McIlvain, R.
California, University of; Alaska, University of, Institute of Social, Economic and Governmental Research; U.S. Dept. of State
ADDRESS: College Park, MD 20740; USDA, Washington, DC 20250
TITLE: Transporting Natural Gas from the Arctic: The Alternative Systems
111 p.
1977
SPONSOR: American Enterprise Institute for Public Policy Research
KEYWORDS: NATURAL GAS; ARCTIC; FUEL ECONOMY; ENVIRONMENTAL IMPACT; TABLES (DATA); ECONOMIC ANALYSIS; TRANSPORTATION; GOVERNMENT POLICIES; TRANSPORTATION SYSTEMS
AVAILABILITY: American Enterprise Institute for Public Policy Research, 1100 Seventeenth St. NW, Washington, DC 20036 $3.25

<407> Mechanical Technology Inc., R&D Division
ITLE: Characterization Study of an Electric Motor-Transmission System for Electric Vehicles
1976
SPONSOR: D. E. Dept. of Energy, Division of Transportation Energy Conservation
KEYWORDS: ELECTRIC VEHICLES; PERFORMANCE; DESIGN; AUTOMOBILE TRANSMISSIONS; TABLES (DATA); GRAPHS (CHARTS)
AVAILABILITY: BY Invitation

<408> Bellis, R.S.
U.S. Dept. of Transportation, Transportation System Center
ADDRESS: Kendall Square, Cambridge, MA 02142
TITLE: Aggregate into Travel Forecasting: State of Art and Suggestions for Future Research
1976
SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Systems Development and Technology
KEYWORDS: TRAVEL; FORECASTING; AUTOMOBILES; MODELS; VEHICLE MILES TRAVELED
AVAILABILITY: BY Invitation

<409> Hencin, L.; Blueberg, A.B.
Ford Motor Co., Engineering and Research Staff
ADDRESS: Dearborn, MI
TITLE: Representation of Engine Data by Multi-Variate Least-Squares Regression
1978
KEYWORDS: AUTOMOTIVE ENGINES; VELOCITY; PERFORMANCE; DESIGN; LOADING FACTOR; FUEL ECONOMY; AUTOMOTIVE CONTROL SYSTEMS; REGRESSION ANALYSIS; AUTOMOTIVE EMISSIONS; TABLES (DATA)
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096 $2.50

<410> Hencin, L.; Tobler, W.E.; Blueberg, A.B.
Ford Motor Co., Engineering and Research Staff
ADDRESS: Dearborn, MI
TITLE: Simulation of Idle-Open Throttle Vehicle Performance
1978
KEYWORDS: MODELS; COMPUTERIZED SIMULATION; AUTOMOBILES; VELOCITY; MECHANICAL TRANSMISSIONS; TURNS; FRICTION; AUTOMOTIVE ENGINES; PERFORMANCE; GRAPHS (CHARTS)
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096 $2.50

<411> Mercedes-Benz of North America Inc., Advertising and Sales Promotion Dept.
ADDRESS: One Mercedes Drive, Montvale, NJ 07645
TITLE: Directory of Diesel Fuel Stations and Authorized Mercedes-Benz Dealers
112 p.
1977
KEYWORDS: RETAIL TRADE; DIRECTORIES; DIESEL FUELS; STATE ANALYSES; CANADA; MAPS; AUTOMOBILES; GAS STATIONS; SALES
Highland, P.; Bahn, W.P.

Boo, Allan & Bannister Inc., Design and Development Division

Address: Cleveland, OH, 44113

Title: Preliminary Power Train Design for a State-of-the-Art Electric Vehicle


1974. April

Sponsors: U.S. Dept. of Energy, Division of Transportation Energy Conservation, Electric and Hybrid Vehicle Systems Program; National Aeronautics and Space Administration, Lewis Research Center

Keywords: Power Train Systems; Electric Vehicles; Technology Assessment; Motors; Automobile Transmissions; Models; Design; Computerized Simulation; Diagrams; Tables (Data)

Availability: NTIS

Hile, J.D.; Hapseth, G.W.

General Motors Corp., Engineering Staff

Address: Detroit, MI

Title: Optimizing Engine and Car Design for Fuel Economy and Emissions

Paper presented at the Society of Automotive Engineers, Autumn Section

Keywords: Fuel Economy; Automotive Engineering; Automobiles; Design; Weight; Automotive Emission Control; Fuel Consumption; Graphs (Charts); Performance

Availability: Society of Automotive Engineers Inc., 425 Commonwealth Drive, Warrendale, PA 15086 for AS E 839

Lowe, J.J.; Cancini, G.; Kessler, H.

Chilton Co.

Address: Radnor, PA 19086

Title: Automobile Characterization Historical Data Base

Report No. DOT-ESEC-OST-77-12; 76 p.

1977. August

Sponsors: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Systems Development and Technology; U.S. Dept. of Transportation, Transportation Systems Center

Keywords: Data Bases; History; Automobiles; Characteristics; Fuel Economy; Production; Sales (Data); Automotive Emissions; Manufacturers; Comparative Evaluations; Performance; Operation; Weight

Availability: NTIS

Singer, D.E.

Copper Development Association Inc.

Address: Birmingham, AL

Title: Comparison of an Electric Versus a Gasoline Powered Utility Truck in Two Years of a Service Test Program


1976. September

Keywords: Comparative Evaluations; Electric Vehicles; Testing; Operating Costs; Maintenance; Fuel Consumption

Availability: Electric Vehicle Council, R9 Park Ave., New York, NY 10016 $1.00

Hartley, W.

Ohio State University, Dept. of Civil Engineering

Address: Columbus, OH

Title: Methodology of Comparing Modes in Urban Transport


1977. January

Sponsors: Ohio State University, Graduate School

Keywords: Urban Transportation; Comparative Evaluations; Transportation Systems; Rail Transportation; Urban Transit; Public Buses (Vehicles); Costs; Bay Area Rapid Transit System

Hittal, R.M.

Union College, Mechanical Engineering Dept.

Address: Schenectady, NY 12308

Title: Energy Intensity of Intercity Passenger Rail


1977. December

Sponsors: U.S. Dept. of Transportation, Office of University Research

Keywords: Rail Transportation; Energy Intensity; Passenger Transportation; Load Factor; Intercity Transportation; Efficiency; Energy Consumption; Railroad Cars; Operation; Capacity; Electric Rail Systems; Automobiles; Buses (Vehicles); Graphs (Charts); Tables (Data)

Availability: GPO

Hittal, R.M. (ed.)

Union College

Address: Schenectady, NY 12308

Title: Third National Conference on the Effects of Energy Constraints on Transportation Systems


1977. May

Sponsors: Energy Research and Development Administration, Division of Transportation Energy Conservation

Keywords: Transportation Systems; Energy Conservation; Energy Consumption; Urban Transportation; Bay Area Rapid Transit System; Cargo Transportation; Rail Transportation; Passenger Transportation; Regulations; Carpooling; Public; Fuel Economy; Intercity Transportation; Rapid Transit Systems; Air Transportation; Tables (Data); Conferences; Computerized Resolution

Availability: GPO, Stock No. 000-000-00073-5

Hittal, R.M.; Ross, A.

Union College, Mechanical Engineering Dept.
(410) CONT.
ADDRESS: Schenectady, NY 12308
TITLE: Track Data Characteristics for New York City - Buffalo Corridor
1977, August
SPONSOR: U.S. Dept. of Transportation, Office of University Research
KEYWORDS: NEW YORK CITY; RAIL TRANSPORTATION; RAILROAD TRACKS; DISTANCE; BUFFALO (NY); TRACK PERFORMANCE; EFFICIENCY; AUTOMOBILES; URBAN TRANSPORTATION; SPEED LIMITS; CHARACTERISTICS; TABLES (DATA); GRAPHS
(CHARTS); COMPARATIVE EVALUATIONS

(420) Nittal, R.K.; Santamaria, J.
Union College, Mechanical Engineering Dept.
ADDRESS: Schenectady, NY 12308
TITLE: State of the Art in Passenger Rail-Rolling Stock Equipment
1977, September
SPONSOR: U.S. Dept. of Transportation, Office of University Research
KEYWORDS: RAILROADS; EQUIPMENT; PASSENGER TRANSPORTATION; PERFORMANCE; LOCOMOTIVES; RAILROAD CARS; PHYSICAL PROPERTIES; MECHANICAL PROPERTIES; FUEL CONSUMPTION; GRAPHS (CHARTS); DIAGRAMS; TABLES (DATA); EFFICIENCY; ARTIFICIAL AERIALS
AVAILABILITY: NTIS

(427) Wu, M.Y. (Compiler)
General Motors Corp., Research Laboratories, Librarian, System on Automotive Safety Information
ADDRESS: Warren, MI 48090
Report No. SAE 77-401, 1 v.
1977, April 15
KEYWORDS: ELECTRIC VEHICLES; BIBLIOGRAPHIES; HISTORY; CONFERENCES; ENVIRONMENTAL IMPACT; GOVERNMENT POLICIES; AUTOMOBILES; BUSES (VEHICLES); HYBRID ELECTRIC-POWERED VEHICLES; TRUCKS; BANCS; BATTERIES

(429) Rouchef, L.W.; Sauer, T.V.; Pittrak, P.
Michigan State University, Dept. of Park and Recreation Management
ADDRESS: East Lansing, MI
TITLE: The Influence of Gasoline Prices and Availability Upon Recreation Travel Propensity
Communications, 31(9), 431-447
1977
KEYWORDS: SPECIFIC GREAT LAKES REGIONAL CONSUMPTION; KEYWORDS: GASOLINE; PRICES; RECREATIONAL TRAVEL; FUEL CONSUMPTION; TOURISM; GREAT LAKES; MUSICAL ANALYSIS; ENCOURAGE AUTOMOBILES; ATTITUDES; PUBLIC OPINION

(432) Hooven, H.
National Aeronautics and Space Administration
ADDRESS: Denver, CO 80225
TITLE: Performance Characteristics of a Diesel Engine Using Low- and Medium-Energy Gases as a Fuel Supplement (Ammoniation)
1976, October
SPONSOR: National Aeronautics and Space Administration
KEYWORDS: DIESEL ENGINES; SOLID WASTES; ALTERNATE FUELS; FERMENTATION; DIESEL FUELS; PERFORMANCE; SYNTHETIC FUELS
AVAILABILITY: NTIS

(429) Hooven, A.L.
Stanford Research Institute
ADDRESS: Menlo Park, CA 94025
TITLE: Energy Study of Railroad Freight Transportation. Volume 1: Executive Summary
SRI Project TCU 5419, 37 p.
1977, August
SPONSOR: Energy Research and Development Administration
KEYWORDS: RAIL TRANSPORTATION; CARGO TRANSPORTATION; ENERGY CONSUMPTION; ENERGY CONSERVATION; GOVERNMENT POLICIES; REGULATIONS; ECONOMICS; EQUIPMENT; EFFICIENCY; GRAPHS (DATA)

(425) Hooven, A.L.
Stanford Research Institute
ADDRESS: Menlo Park, CA 94025
SRI Project TCU 5419, 146 p.
1977, August
SPONSOR: Energy Research and Development Administration
KEYWORDS: RAIL TRANSPORTATION; CARGO TRANSPORTATION; ENERGY CONSUMPTION; ENERGY CONSERVATION; GOVERNMENT POLICIES; REGULATIONS; ECONOMICS; EQUIPMENT; EFFICIENCY; HISTORY; CONSTRUCTION; RAILROADS; MODELS; COSTS; TRAINS; REGULATIONS; TABLES (DATA); GRAPHS (CHARTS)

(426) Hooven, A.L.; Proctor, H.L.
Stanford Research Institute
ADDRESS: Menlo Park, CA 94025
SRI Project TCU 5419, 195 p.
1977, August
SPONSOR: Energy Research and Development Administration
KEYWORDS: RAIL TRANSPORTATION; CARGO TRANSPORTATION; EFFICIENCY; FORECASTING; TECHNOLOGY; ENERGY CONSERVATION; RAILWAYS; RESEARCH; BIBLIOGRAPHIES; COSTS; EQUIPMENT

(427) Hooven, H.; A. (Ed.)
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Ave. NW, Washington,
<365> CONT.
ADDRESS: Baltimore, MD
TITLE: Status of Alcohol Fuels Utilization in the Transportation Industry for Highways Transportation
1978, June
SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation
KEYWORDS: ALTERNATIVE FUELS; UTILIZATION; ALCOHOL FUELS; HIGHWAY TRANSPORTATION; ETHEROL; ETHER; TESTING; ENGINES; EMISSIONS; PERFORMANCE; FUEL ECONOMY; FUEL CONSUMPTION; COMPARATIVE EVALUATIONS; PROPERTIES; COSTS; GRAPHS (CHARTS); WATER
AVAILABILITY: NTIS

<366> Judges: University of Maryland
ADDRESS: Baltimore, MD
TITLE: Report on the Status of Alcohol Fuels Utilization in the Transportation Industry for Highways Transportation
1978, June
SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation
KEYWORDS: ETHEROL; ETHER; TESTING; ENGINES; EMISSIONS; PERFORMANCE; FUEL ECONOMY; FUEL CONSUMPTION; COMPARATIVE EVALUATIONS; PROPERTIES; COSTS; GRAPHS (CHARTS); WATER
AVAILABILITY: NTIS

<367> Seitz, R.M.; Dollfus, L.; Dougbery, C.B.
ADDRESS: Baltimore, MD
TITLE: Development of Methanol-Gasoline Blends
1978, June
SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation
KEYWORDS: ALTERNATIVE FUELS; UTILIZATION; ALCOHOL FUELS; HIGHWAY TRANSPORTATION; ETHEROL; ETHER; TESTING; ENGINES; EMISSIONS; PERFORMANCE; FUEL ECONOMY; FUEL CONSUMPTION; COMPARATIVE EVALUATIONS; PROPERTIES; COSTS; GRAPHS (CHARTS); WATER
AVAILABILITY: NTIS

<368> Seitz, R.M.
ADDRESS: Baltimore, MD
TITLE: Multi-Project Scheduling for Transportation Construction Programs
Report presented at the 5th Annual Meeting of the Transportation Research Board, published in Transportation Research Record 585, 17-24
1976
KEYWORDS: TRANSPORTATION; CONSTRUCTION; SCHEDULING; STATE GOVERNMENTS; MANAGEMENT; DESIGN; PLANNING
AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418
$3.00 for Transportation Research Record 585

<369> Seitz, R.M.
ADDRESS: Knoxville, TN
TITLE: Mass Transit Guidelines Versus a Consumer
National Academy of Sciences, National Research Council, Assembly of Engineering, Energy, Manufacturing, and Industrial Systems

TITLE: Development of Energy Storage Systems

1977

SPOONS: Energy Research and Development Administration

KEYWORDS: ELECTRIC VEHICLES; DEVELOPMENT; TRANSPORTATION; LEGISLATION; ENERGY STORAGE; BATTERIES; FLYWHEELS; FORECASTING; HYBRID ELECTRIC-POWERED VEHICLES

National Academy of Sciences, National Research Council, Assembly of Life Sciences, Committee on Toxicology


1976

SPOONS: U.S. Environmental Protection Agency

KEYWORDS: HIGHWAY TRANSPORTATION; MOTOR VEHICLES; FEMS; FOOD ADDITIVES; AUTOMOTIVE EMISSIONS; HEALTH HAZARDS; TOXICITY; POLLUTION REGULATIONS; STANDARDS; TESTING

AVAILABILITY: National Academy of Sciences, 2101 Constitution Avenue, Washington, DC 20418

Steel Transportation Council, Highway Research Board

TITLE: Travel Behavior


1973

KEYWORDS: TRAVEL; BEHAVIOR; URBAN TRANSPORTATION; TRAFFIC; (RESEARCH); INTERCITY TRANSPORTATION; MODELS; CHICAGO

AVAILABILITY: $2.20

National Academy of Sciences, National Research Council

ADDRESS: 2101 Constitution Ave., NW, Washington, DC 20418

TITLE: Transportation Forecasting


1973

KEYWORDS: TRANSPORTATION; FORECASTING; PLANNING; URBAN TRANSPORTATION; RECREATION; MODELS; AUTOMOBILES; OWNERS; REGIONAL ANALYSIS; AIR TRANSPORTATION; PASSenger CARRIERS; TRAVEL DEMAND (ECONOMICS); SURVEYS; GRAPHS (CHARTS)

AVAILABILITY: $3.80

National Academy of Sciences, National Research Council, Transportation Research Board

ADDRESS: 2101 Constitution Ave., NW, Washington, DC 20418

TITLE: New Approaches to Travel Forecasting

Transportation Research Record 569, papers prepared for the Ninety-First Annual Meeting of the Transportation Research Board, 157 p.

1976

KEYWORDS: TRAVEL; FORECASTING; CONFERENCES; TRAFFIC; PLANNING; BEHAVIOR; AUTOMOBILES; OWNERS; URBAN TRANSPORTATION; MODELS; SHOPPERS; RECREATION; COMPUTING; INTERCITY TRANSPORTATION; DEMAND (ECONOMICS); GRAPHS (CHARTS)

AVAILABILITY: $6.00
<ART>
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Ave NW, Washington, DC 20401
TITLE: Freight Transportation Characteristics
Transportation Research Record 594, 53 p.
1976
AVAILABILITY: $3.70
</ART>

<ART>
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Ave NW, Washington, DC 20401
TITLE: Travel and Aviation Facilities Planning
Transportation Research Record 579, papers presented at the 59th Annual Meeting of the Transportation Research Board, 43 p.
1976
AVAILABILITY: $3.70
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<ART>
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Ave NW, Washington, DC 20401
TITLE: Travel Behavior and Values
Transportation Research Record 534, papers presented at the 57th Annual Meeting of the Transportation Research Board, 75 p.
1975
KEYWORDS: TRAVEL; BEHAVIOR: PREFERENCES: URBAN TRANSPORTATION: SOCIO-ECONOMIC FACTORS; MATHEMATICAL MODELS: TABLES (DATA): GRAPHS
AVAILABILITY: $3.70
</ART>

<ART>
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Ave NW, Washington, DC 20401
TITLE: The Bicycle as a Transportation Mode
Transportation Research Record 570, 1 report prepared for the 53rd Annual Meeting and 6 reports prepared for the 55th Annual Meeting of the Transportation Research Board, 45 p.
1976
KEYWORDS: CYCLES; TRANSPORTATION: LEGISLATION; MACHINES; DEVELOPMENT: URN TRANSPORTATION: SAFETY; EXISTING; TABLES (DATA): SIMULATION; MODELS
</ART>

<ART>
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Ave NW, Washington, DC 20401
TITLE: Planning and Programming for Transportation
Transportation Research Record 576, papers presented at the 54th Annual Meeting of the Transportation Research Board, 50 p.
1976
KEYWORDS: PLANNING; TRAVEL; TRANSPORTATION; URBAN TRANSPORTATION: LOS ANGELES; NETWORK ANALYSIS: MODELS: BALANCE (VISION): PUBLIC TRANSPORTATION; GRAPHS (CHARTS): TABLES (DATA)
AVAILABILITY: $3.60
</ART>

<ART>
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Ave NW, Washington, DC 20401
TITLE: Transportation Characteristics of Truck, Rail, and Water Freight
Report No. FD-256000, Transportation Research Record No. 577, papers presented at the 56th Annual Meeting of the Transportation Research Board, 57 p.
1976
AVAILABILITY: Transportation Research Board $2.20; NBS
</ART>

<ART>
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Ave NW, Washington, DC 20401
TITLE: Intercity Freight Movement by Rail and Highway
Transportation Research Record 571, papers presented at the 55th Annual Meeting of the Highway Research Board, 2277
0-239-22390-6, 44 p.
1976
AVAILABILITY: $2.50
</ART>

<ART>
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Ave NW, Washington, DC 20401
TITLE: Travel Demand Forecasting
1975
KEYWORDS: TRAVEL; DEMAND; ECONOMIC: FORECASTING: AIR TRANSPORTATION: URBAN TRANSPORTATION: PLANNING: BEHAVIOR: TRANSPORTATION: PASSENGER TRANSPORTATION: MODELS; INTERCITY TRANSPORTATION
AVAILABILITY: $2.40
</ART>

<ART>
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Ave NW, Washington, DC 20401
TITLE: Planning and Programming for Transportation
Transportation Research Record 576, papers presented at the 54th Annual Meeting of the Transportation Research Board, 50 p.
1976
KEYWORDS: PLANNING; TRAVEL; TRANSPORTATION; URBAN TRANSPORTATION: LOS ANGELES; NETWORK ANALYSIS: MODELS: BALANCE (VISION): PUBLIC TRANSPORTATION; GRAPHS (CHARTS): TABLES (DATA)
AVAILABILITY: $3.60
</ART>
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Avenue NW, Washington, DC 20418
TITLE: Regional Bus Transportation
Transportation Research Record 546, papers presented for the 54th Annual Meeting of the Transportation Research Board, 63 p.
1975
KEYWORDS: REGIONAL ANALYSIS: BUSES (VEHICLES); PUBLIC TRANSPORTATION; RIGHT-OF-WAY; RAPID TRANSIT SYSTEMS; CAPACITY; PLANNING; LOS ANGELES; PASSENGER TRANSPORTATION; LOCAL GOVERNMENT; URBAN TRANSPORTATION; ECONOMICS; TRAFFIC CONTROL
AVAILABILITY: $2.60

National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Avenue NW, Washington, DC 20418
TITLE: Bus Transit Development
Transportation Research Record 552, papers presented for the 55th Annual Meeting of the Transportation Research Board, 57 p.
1977
KEYWORDS: BUS TRANSPORTATION: URBAN TRANSPORTATION; PUBLIC TRANSPORTATION; RAPID TRANSIT SYSTEMS; ECONOMICS; TABLES (DATA); GRAPHS (CHARTS); EUROPE; REGIONAL ANALYSIS
AVAILABILITY: $2.60

National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Avenue NW, Washington, DC 20418
TITLE: Transporation Research Record 555, papers presented for the 55th Annual Meeting of the Transportation Research Board, 122 p.
1976
KEYWORDS: PLANNING: TAXICABS; RAPID TRANSIT SYSTEMS; PASSENGER TRANSPORTATION: BUSES (VEHICLES); CORPORATION: URBAN TRANSPORTATION; COMPETITION: INVESTIGATIONS; WIU: COMPETITION: TRANSPORTATION UNDISCOVERED: TABLES (DATA); GRAPHS (CHARTS); RURAL AREAS: MOBILITY
AVAILABILITY: $10.00

National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Avenue NW, Washington, DC 20418
TITLE: Public Transportation Planning
Transportation Research Record 562, papers presented for the 56th Annual Meeting of the Transportation Research Board, 96 p.
1976
AVAILABILITY: $9.00

National Academy of Sciences, National Research Council, Transportation Research Board, Commission on Sociotechnical Systems
ADDRESS: Washington, DC
17 p.
1976
SPONSOR: Energy Research and Development Administration
KEYWORDS: PLANNING: TRANSPORTATION: RESEARCH: US EDA; ENERGY DEMAND; ENERGY SUPPLIES; ENERGY RESOURCES; FORECASTING; ENERGY CONSERVATION; DEMAND (ECONOMIC); GOVERNMENT POLICIES; SOCIO-ECONOMIC FACTORS
AVAILABILITY: National Academy of Sciences, 2101 Constitution Ave., Washington, DC 20418

National Aeronautics and Space Administration, Lewis Research Center
ADDRESS: Cleveland, OH 44135
TITLE: State-of-the-Art Assessment of Electric and Hybrid Vehicles
1978, January
Transportation Research Record 576, papers presented at the 54th Annual Meeting of the Transportation Research Board, 50 p.
1976
KEYWORDS: PLANNING; TRAVEL; TRANSPORTATION; URBAN TRANSPORTATION; LOS ANGELES; NETWORK ANALYSIS; MODELS; SIMULATION; PUBLIC TRANSPORTATION; SHAPES (CHARTS); TABLES (DATA)
AVAILABILITY: $2.60

Transportation Research Record 577, papers presented at the 54th Annual Meeting of the Transportation Research Board, 51 p.
1976
KEYWORDS: TRANSPORTATION; TRUCKS; AIR TRANSPORTATION; WATER TRANSPORTATION; RAIL; INLAND WATERWAYS; CARGO TRANSPORTATION; PASSENGERS (DATA); SAMPLES (DATA); COMMODITIES; FORECASTING; RAILROADS; WISCONSIN; STATE GOVERNMENT; COMPUTERIZED SIMULATION; RAILROAD PRICE; PLANNING
AVAILABILITY: Transportation Research Board $2.20; NTSB

Transportation Research Record 578, papers presented at the 54th Annual Meeting of the Transportation Research Board, 43 p.
1976
KEYWORDS: AIR TRANSPORTATION; AIRPORTS; ENVIRONMENTAL IMPACT; LAND USE; NOISE POLLUTION; WATER POLLUTION; AIR POLLUTION; SOIL EROSION; ECONOMIC; NEW YORK CITY; Impact Assessment; Impact (ECONOMIC); COSTS, SHAPES (CHARTS); PLANNING; MODELS
AVAILABILITY: $2.00

Transportation Research Record 579, papers presented at the 54th Annual Meeting of the Transportation Research Board, 75 p.
1976
KEYWORDS: TRAVEL; DEMAND; FORECASTING; URBAN TRANSPORTATION; SOCIO-ECONOMIC FACTORS; MATHEMATICAL MODELS; TABLES (DATA); GRAPHS (DATA)
AVAILABILITY: $2.20

Transportation Research Record 580, papers presented at the 54th Annual Meeting of the Transportation Research Board, 45 p.
1976
KEYWORDS: RECREATIONAL TRANSPORTATION; LEGISLATION; RESEARCH; DEVELOPMENT; URBAN TRANSPORTATION; SAFETY; HISTORIES; TABLES (DATA); SIMULATION; MODELS
AVAILABILITY: $2.60

Transportation Research Record 581, papers presented at the 54th Annual Meeting of the Transportation Research Board, 50 p.
1976
KEYWORDS: PLANNING; TRAVEL; TRANSPORTATION; URBAN TRANSPORTATION; LOS ANGELES; NETWORK ANALYSIS; MODELS; SIMULATION; PUBLIC TRANSPORTATION; SHAPES (CHARTS); TABLES (DATA)
AVAILABILITY: $2.60

Transportation Research Record 582, papers presented at the 54th Annual Meeting of the Transportation Research Board, 51 p.
1976
KEYWORDS: TRANSPORTATION; TRUCKS; AIR TRANSPORTATION; WATER TRANSPORTATION; RAIL; INLAND WATERWAYS; CARGO TRANSPORTATION; PASSENGERS (DATA); TABLES (DATA); COMMODITIES; FORECASTING; RAILROADS; WISCONSIN; STATE GOVERNMENT; COMPUTERIZED SIMULATION; RAILROAD PRICE; PLANNING
AVAILABILITY: Transportation Research Board $2.20; NTSB

Transportation Research Record 583, papers presented at the 54th Annual Meeting of the Transportation Research Board, 75 p.
1976
KEYWORDS: TRAVEL; DEMAND; FORECASTING; URBAN TRANSPORTATION; SOCIO-ECONOMIC FACTORS; MATHEMATICAL MODELS; TABLES (DATA); GRAPHS (DATA)
AVAILABILITY: $2.20

Transportation Research Record 584, papers presented at the 54th Annual Meeting of the Transportation Research Board, 45 p.
1976
KEYWORDS: RECREATIONAL TRANSPORTATION; LEGISLATION; RESEARCH; DEVELOPMENT; URBAN TRANSPORTATION; SAFETY; HISTORIES; TABLES (DATA); SIMULATION; MODELS
AVAILABILITY: $2.60

Transportation Research Record 585, papers presented at the 54th Annual Meeting of the Transportation Research Board, 50 p.
1976
KEYWORDS: PLANNING; TRAVEL; TRANSPORTATION; URBAN TRANSPORTATION; LOS ANGELES; NETWORK ANALYSIS; MODELS; SIMULATION; PUBLIC TRANSPORTATION; SHAPES (CHARTS); TABLES (DATA)
AVAILABILITY: $2.60

Transportation Research Record 586, papers presented at the 54th Annual Meeting of the Transportation Research Board, 51 p.
1976
KEYWORDS: TRANSPORTATION; TRUCKS; AIR TRANSPORTATION; WATER TRANSPORTATION; RAIL; INLAND WATERWAYS; CARGO TRANSPORTATION; PASSENGERS (DATA); TABLES (DATA); COMMODITIES; FORECASTING; RAILROADS; WISCONSIN; STATE GOVERNMENT; COMPUTERIZED SIMULATION; RAILROAD PRICE; PLANNING
AVAILABILITY: Transportation Research Board $2.20; NTSB

Transportation Research Record 587, papers presented at the 54th Annual Meeting of the Transportation Research Board, 75 p.
1976
KEYWORDS: TRAVEL; DEMAND; FORECASTING; URBAN TRANSPORTATION; SOCIO-ECONOMIC FACTORS; MATHEMATICAL MODELS; TABLES (DATA); GRAPHS (DATA)
AVAILABILITY: $2.20

Transportation Research Record 588, papers presented at the 54th Annual Meeting of the Transportation Research Board, 45 p.
1976
KEYWORDS: RECREATIONAL TRANSPORTATION; LEGISLATION; RESEARCH; DEVELOPMENT; URBAN TRANSPORTATION; SAFETY; HISTORIES; TABLES (DATA); SIMULATION; MODELS
AVAILABILITY: $2.60

Transportation Research Record 589, papers presented at the 54th Annual Meeting of the Transportation Research Board, 50 p.
1976
KEYWORDS: PLANNING; TRAVEL; TRANSPORTATION; URBAN TRANSPORTATION; LOS ANGELES; NETWORK ANALYSIS; MODELS; SIMULATION; PUBLIC TRANSPORTATION; SHAPES (CHARTS); TABLES (DATA)
AVAILABILITY: $2.60

Transportation Research Record 590, papers presented at the 54th Annual Meeting of the Transportation Research Board, 51 p.
1976
KEYWORDS: TRANSPORTATION; TRUCKS; AIR TRANSPORTATION; WATER TRANSPORTATION; RAIL; INLAND WATERWAYS; CARGO TRANSPORTATION; PASSENGERS (DATA); TABLES (DATA); COMMODITIES; FORECASTING; RAILROADS; WISCONSIN; STATE GOVERNMENT; COMPUTERIZED SIMULATION; RAILROAD PRICE; PLANNING
AVAILABILITY: Transportation Research Board $2.20; NTSB

Transportation Research Record 591, papers presented at the 54th Annual Meeting of the Transportation Research Board, 75 p.
1976
KEYWORDS: TRAVEL; DEMAND; FORECASTING; URBAN TRANSPORTATION; SOCIO-ECONOMIC FACTORS; MATHEMATICAL MODELS; TABLES (DATA); GRAPHS (DATA)
AVAILABILITY: $2.20

Transportation Research Record 592, papers presented at the 54th Annual Meeting of the Transportation Research Board, 45 p.
1976
KEYWORDS: RECREATIONAL TRANSPORTATION; LEGISLATION; RESEARCH; DEVELOPMENT; URBAN TRANSPORTATION; SAFETY; HISTORIES; TABLES (DATA); SIMULATION; MODELS
AVAILABILITY: $2.60

Transportation Research Record 593, papers presented at the 54th Annual Meeting of the Transportation Research Board, 50 p.
1976
KEYWORDS: PLANNING; TRAVEL; TRANSPORTATION; URBAN TRANSPORTATION; LOS ANGELES; NETWORK ANALYSIS; MODELS; SIMULATION; PUBLIC TRANSPORTATION; SHAPES (CHARTS); TABLES (DATA)
AVAILABILITY: $2.60
Transportation Research Record 558, papers prepared for the 56th Annual Meeting of the Transportation Research Board, 95 p.

**1976**

**KEYWORDS:** SOCIAL IMPACT; ECONOMIC IMPACT; SOCIO-ECONOMIC FACTORS; ENVIRONMENTAL IMPACT; TRANSPORTATION; PLANNING; GOVERNMENT POLICIES; TRAVEL; TRAFFIC; MASSACHUSETTS; ENVIRONMENTAL IMPACT STATEMENTS; ECONOMICS; AUTOMOBILES; GOVERNMENT; NORTH CAROLINA; URBAN AREAS; LOCAL GOVERNMENT; STATE ANALYSIS

**AVAILABILITY:** $6.00

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National Academy of Sciences, National Research Council, Transportation Research Board

**ADDRESS:** 2101 Constitution Avenue NW, Washington, DC 20418

**TITLE:** Public Transportation Planning

**TRANSPORTATION RESEARCH RECORD 559, PAPERS PREPARED FOR THE 56TH ANNUAL MEETING OF THE TRANSPORTATION RESEARCH BOARD, 132 P.**

**1976**

**KEYWORDS:** PLANNING; TAXICABS; RAPID TRANSIT SYSTEMS; TRANSPORTATION SYSTEMS; PASSENGER TRANSPORTATION; BUSES (VEHICLES); COMMERCE; URBAN TRANSPORTATION; COMPARATIVE EVALUATION; MAINTENANCE COSTS; TRANSPORTATION DISADVANTAGED; TABLES (DATA); GRAPHS (CHARTS); RURAL AREAS; MOBILITY

**AVAILABILITY:** $10.00

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National Academy of Sciences, National Research Council, Transportation Research Board

**ADDRESS:** 2101 Constitution Avenue NW, Washington, DC 20418

**TITLE:** Regional Bus Transportation

**TRANSPORTATION RESEARCH RECORD 560, PAPERS PREPARED FOR THE 56TH ANNUAL MEETING OF THE TRANSPORTATION RESEARCH BOARD, 96 P.**

**1976**

**KEYWORDS:** REGIONAL ANALYSIS; BUSES (VEHICLES); PUBLIC TRANSPORTATION; 85 MPH; RAPID TRANSIT SYSTEMS; CAPACITY; PLANNING; LOS ANGELES; PASSENGER TRANSPORTATION; LOCAL GOVERNMENT; URBAN TRANSPORTATION; HIGHWAYS; TRAFFIC CONTROL

**AVAILABILITY:** $2.00

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National Academy of Sciences, National Research Council, Transportation Research Board

**ADDRESS:** 2101 Constitution Avenue NW, Washington, DC 20418

**TITLE:** Rail Transit Development

**TRANSPORTATION RESEARCH RECORD 552, PAPERS PREPARED FOR THE 56TH ANNUAL MEETING OF THE TRANSPORTATION RESEARCH BOARD, 97 P.**

**1975**

**KEYWORDS:** RAIL TRANSPORTATION; COMMUTER TRANSPORTATION; PUBLIC TRANSPORTATION; RAY AREA RAPID TRANSIT SYSTEM; ENERGY CONSUMPTION; TRANSPORTATION SYSTEMS; RAPID TRANSIT SYSTEMS; ECONOMICS; TABLES (DATA); GRAPHS (CHARTS); EUROPE; REGIONAL ANALYSIS

**AVAILABILITY:** $2.60

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National Academy of Sciences, National Research Council, Transportation Research Board

**ADDRESS:** 2101 Constitution Avenue NW, Washington, DC 20418

**TITLE:** Energy Effects, Eficiencies, and Prospects for Various Modes of Transportation

**NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM SYNTHESIS OF HIGHWAY PRACTICE 43, 63 P.**

**1977**

**Sponsor:** American Association of State Highway and Transportation Officials; U.S. Dept. of Transportation, Federal Highway Administration

**KEYWORDS:** ENERGY CONSUMPTION; EFFICIENCY; FORECASTING; TRANSPORTATION; PLANNING; COMPARATIVE ANALYSIS; PASSENGER TRANSPORTATION; COMMUTER TRANSPORTATION; ENERGY CONSERVATION; AUTOMOBILES; BUSES (VEHICLES); GRAPHS (CHARTS); TABLES (DATA); RAIL TRANSPORTATION; AIR TRANSPORTATION; BICYCLES; WATER TRANSPORTATION; HIGHWAY TRANSPORTATION; PIPELINES; SLURRY PIPELINES

**AVAILABILITY:** $6.00

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National Academy of Sciences, National Research Council, Transportation Research Board, Committee on Sociotechnical Systems

**ADDRESS:** Washington, DC 20418

**TITLE:** Scope and Plan for a Study of Transportation Energy Research Needs and Priorities. A Report to the Energy Research and Development Administration

**17 P.**

**1976**

**Sponsor:** Energy Research and Development Administration

**KEYWORDS:** PLANNING; TRANSPORTATION; RESEARCH; USE; ENERGY DEMAND; ENERGY SUPPLIES; ENERGY RESOURCES; FORECASTING; ENERGY CONSERVATION; DEMAND (ECONOMIC); GOVERNMENT POLICIES; SOCIO-ECONOMIC FACTORS

**AVAILABILITY:** National Academy of Sciences, 2101 Constitution Ave., Washington, DC 20418

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National Aeronautics and Space Administration, Lewis Research Center

**ADDRESS:** Cleveland, OH 44135

**TITLE:** State-of-the-art Assessment of Electric and Hybrid Vehicles

**REPORT NO.: NCP/91011-91, V.P.**

1976, January
COIT.
Sponsor: U.S. Dept. of Energy, Division of Transportation Energy Conservation
Keywords: Electric Vehicles; Sulfur; Testing; Tables (Data); Batteries; Performance; Electric Vehicle Range; Energy Consumption; Reliability
Availability: NITS

National Aeronautics and Space Administration, Lewis Research Center
Address: Cleveland, OH
Title: "The State-of-the-Art Individual Electric and Hybrid Vehicle Test Reports. Volume I"
1978, July
Sponsor: U.S. Dept. of Energy, Division of Transportation Energy Conservation
Keywords: Electric Vehicles; Hybrid Electric-Power Vehicles; Testing; Driving Cycle; Energy Consumption; Performance; Batteries; Tables (Data); Graphs (Charts); Manufacturers
Availability: NITS

National Association of State Directors of Pupil Transportation Services
Title: 1975-76 Statistics on Pupil Transportation
3 p.
Keywords: State Analysis; Expenditures; Buses (Vehicles); Statistics; Ownership; Schools; Children

National Petroleum Council
208 p.
1975, August 6
Sponsor: U.S. Dept. of Interior
Keywords: Air Transportation; State Analysis; Financial Data; Tests; Batteries; Manufacturers; Energy Efficiency; Energy Consumption; Costs; Electric Power Demand; Natural Gas; Fuel Oil; Space Heating; Air Conditioning; Water Heating; Life Style; Automobiles; Appliances; Tables (Data); Regional Analysis; Costs; Population (Statistics); Owners; Attitudes; Energy Conservation
Availability: NITS

National Petroleum News
Address: 1221 Ave. of the Americas, New York, NY 10020
Title: 1976 National Petroleum News Factbook Issue
1978, Mid-June
Keywords: Air Transportation; State Analysis; Financial Data; Tests; Batteries; Manufacturers; Efficiency; Energy Consumption; Costs; Electric Power Demand; Natural Gas; Fuel Oil; Space Heating; Air Conditioning; Water Heating; Life Style; Automobiles; Appliances; Tables (Data); Regional Analysis; Costs; Population (Statistics); Owners; Attitudes; Energy Conservation
Availability: NITS

Nicholas, R.L.
National Petroleum Council
Address: Washington, DC
Title: Balancing Requirements for World Oil and Energy
Chemical Engineering Progress, 70(10), 36-48
1974, October
Keywords: Energy Demand; Petroleum; Energy Supplies; Imports; Energy Resources; Production; Tables (Data); Growth; International Trade; Fossil Fuels; Synthetic Fuels; Coal; Government Policies; Forecasting; Energy Consumption

1976, September

KEYWORDS: ELECTRIC BATTERIES; ELECTRIC VEHICLES; RESEARCH; PERFORMANCE; MODELS; COMPARATIVE EVALUATIONS; LEAD-ACID BATTERIES; GRAPHS (CHARTS)

AVAILABILITY: Electric Vehicle Council, 90 Park Ave., New York, NY 10016 $1.50

<988>

Petroleum Publishing Co.
ADDRESS: 1721 S. Sheridan Road, Tulsa, OK 74103
TITLE: Petroleum/2000

1977, August

KEYWORDS: PETROLEUM; FORECASTING; EXPLORATION; PRODUCTION; PIPELINES; NATURAL GAS LIQUIDS; REFINING; PETROLEUM REFINING; PETROCHEMICALS; PROCESSING; PETROLEUM INDUSTRY; ALTERNATE FUELS; GRAPHS (CHARTS); HISTORY; DOMESTIC NATURAL GAS; INTERNATIONAL RELATIONS

AVAILABILITY: $10.00

<989>

Phoenix, C.B.
Self Research and Development Co.
ADDRESS: Pittsburgh, PA 15230

1979


1977, November

SPONSORS: U.S. Dept. of Energy, Division of Transportation Energy Conservation

KEYWORDS: PEAK ECONOMY; GASOLINE; REFINING; FUEL INJECTION SYSTEMS; STIRLING ENGINES; GAS ENGINES; AUTOMOBILES; COMPARATIVE EVALUATIONS; DRIVING CYCLE; HIGHWAY TRANSPORTATION; EFFECT STORAGE; VEHICLE TRIPS; TESTING; PEAK CONSUMPTION; VEHICLE MILES TRAVELED; PHOTOGRAPHS; AUTOMOBILE OCCUPANCY

AVAILABILITY: NTIS

<990>

Pelican, J.G.; Agent, R.H.; Hayes, J.G.; Legner, C.R.

Kentucky Dept. of Transportation, Bureau of Highways

TITLE: Optimal Highway Safety Improvement Investments by Dynamic Programming

Report presented at the 54th Annual Meeting of the Transportation Research Board, published in Transportation Research Record 565, 40-59

1976

KEYWORDS: SECONDARY SAFETY; PLANNING; MANAGEMENT; INVESTMENTS; OPTIMIZATION

AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave., NW, Washington, DC 20418 $3.60 for Transportation Research Record 565

<991>

Pipe line and Underground Utilities Construction
ADDRESS: 3341 E. Harcoster St., Houston, TX 77027

1978

ADDRESS: Annual Contractors Issue 1978


1976, June 15

KEYWORDS: CONSTRUCTION; EQUIPMENT; COMPRESSORS; MANUFACTURERS; UTILITIES; ENERGY TRANSPORT; SERVICES; ENGINEERING; GAS; INTERNATIONAL ORGANIZATIONS; UNDERGROUND FACILITIES; WATER PIPELINES; PIPELINES; EXCAVATION

<992>

Popular Science
ADDRESS: 380 Madison Ave., New York, NY 10017

1977

TITLE: Motorcycling Handbook 1977

136 p.

1977, Spring

KEYWORDS: CYCLES; RECREATION VEHICLES; MOTOR HOMES; TRUCKS; TRAVEL; EQUIPMENT; SIZE; PRICES

AVAILABILITY: $1.50

<993>

Pourrier, R.N.; Robinson, C.W.; Delameter, W.R.; Saada Laboratories
ADDRESS: Livermore, CA

TITLE: A Variable-Displacement Spark-Ignition Engine


1970, June

SPONSORS: U.S. Dept. of Energy, Division of Transportation Energy Conservation

KEYWORDS: VAPOR EMISSION ENGINES; VARIABLE DISPLACEMENT ENGINES; EXHAUST RECYCLATION

AVAILABILITY: NTIS
Title: The Potential for Transit as an Energy Saving Option

1975, November

Sponsor: Federal Energy Administration

Keywords: Public Transportation; Urban Transportation; Energy Conservation; Vehicle Miles Traveled; Automobiles; Regional Analysis; Passenger Transportation; Graphs (Charts); Tables (Data); Models; Efficiency; Federal Highway Administration

Title: Forecasting of Worldwide Air Traffic Activity

1976, July

Sponsor: Regional Airports Authority

Keywords: Forecasting; Airports; Aviation Industry; Aircraft; Aircraft Types; Air Traffic; Airports

Title: The Availability of Regulatory Electric Vehicles for Energy Conservation

1976, August

Sponsor: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Systems Development and Technology, Office of Systems Engineering

Keywords: Electric Vehicles; Batteries; Propulsion; Life-Cycle Cost; Energy Conservation; Government Policies; Fuel Consumption; Efficiency; Tables (Data); Graphs (Charts); Comparative Evaluations

Title: Piano Technology Inc.; Urban Transportation for Technology Initiatives, Transportation Task Force

1976, September

Sponsor: U.S. Dept. of Transportation, Urban Mass Transportation Administration; U.S. Dept. of Transportation, Federal Highway Administration

Keywords: Transportation; Research; Aspects; Transportation Systems; Public Transportation; Highways; Buses (Vehicles); Planning; Mass Transportation; Air Transportation; Traffic Control

Title: Pricing in Urban Transportation: A Survey of Empirical Evidence on the Elasticity of Travel Demand

1976, July

Sponsor: Regional Airports Authority

Keywords: Urban Transportation; Prices; Rates (Costs); Models; Elasticity (Economies); Gasoline; Demand (Economies); Energy Conservation; Income; Tables (Data); Energy Consumption

Availability: MIT, Center for Transportation Studies, 77 Massachusetts Avenue, Cambridge, MA 02139 $6.00
<506>
Pfader, J.R.
Massachusetts Institute of Technology, Dept. of Urban Studies and Planning
Address: Cambridge, MA 02139
Title: Projections of 1980 Freight Demands for Selected Northeastern Railroads
1976, September
Sponsor: U.S. Dept. of Transportation, Office of University Research
KEYWORDS: FORECASTING; RAIL TRANSPORTATION; RAILWAYS; MIDWESTERN STATES; CARGO TRANSPORTATION; COSTS; TABLES (DATA); MAPS; COMMODITIES; INCOME-OUTPUT ANALYSIS; REGIONAL ANALYSIS; HISTORY
Availability: NTSIS

<507>
 Purdue University, Institute for Interdisciplinary Engineering Studies
Address: West Lafayette, IN
Title: Opportunity and Limitations of the Electric and Hybrid Vehicle Research, Development and Demonstration Act of 1976
Report No. RUP/HY250-01 (Previously Issued as CDD-4750-1), 220 p.
1978, January
Sponsor: U.S. Dept. of Energy, Division of Transportation Energy Conservation
KEYWORDS: ELECTRIC VEHICLES; HYBRID ELECTRIC-BURNING VEHICLES; COMMERCIALIZATION; ENERGY DEMAND; COSTS; PERFORMANCE; TABLES (DATA); ELECTRIC VEHICLE RANGE; TRANSPORTATION; PIGEONS; ENERGY CONSERVATION; TECHNOLOGY ASSESSMENT; INSTITUTIONAL FACTORS; SAFETY
Availability: NTSIS

<508>
Pashkev, N.S.; Yapan, J.N.
Regional Plan Association
Address: 235 East 45 Street, New York, NY 10017
Title: Power for the USA: An Evaluation of Future Riderhip, Service, and Electric Power Requirements for Metropolitan Transportation Authority Facilities
WPa Bulletin 126, 90 p.
1977, June
Sponsor: New York State Power Authority
KEYWORDS: NEW YORK CITY; PUBLIC TRANSPORTATION; ELECTRIC MOTOR VEHICLES; COMMERCE; COSTS; PERFORMANCE; PUBLIC TRANSPORTATION; AUTOMOBILES; REGIONAL ANALYSIS; REN-ROGUE DEMAND; ELECTRIC VEHICLES; GRAPHS (CHARTS): RAPID TRANSIT SYSTEMS; TABLES (DATA); PLANNING; EQUIPMENT; SUBWAYS; AIR CONDITIONING; REGENERATIVE BRAKING; MASS TRANSPORTATION

<509>
Rabe, P.T.
Environmental Impact Center Inc.
Address: 55 Chapel Street, Newton, MA 02158
Title: Uncertainties in Estimates of Fleet Average Fuel Economy: A Statistical Evaluation
1977, June
Sponsor: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Systems Development and Technology: U.S. Dept. of Transportation, Transportation System Center
KEYWORDS: AUTOMOTIVE FLEETS; FUEL CONSUMPTION; FUEL CONSUMPTION; TABLES (DATA); STRATIFICATION; ESTIMATES; STATISTICAL ANALYSIS; TESTING
Availability: NTSIS

<510>
Rabe, P.T.
Environmental Impact Center Inc.
Address: 55 Chapel Street, Newton, MA 02158
Title: Study Design for a Method of Projecting Vehicle Miles of Travel
1977, August
Sponsor: U.S. Dept. of Transportation, Transportation System Center: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Systems Development and Technology, Office of Systems Engineering
KEYWORDS: VEHICLE MILES TRAVELED; FORECASTING; TRAVEL; AUTOMOBILES; MODELS; RESEARCH; DATA ACQUISITION; ESTIMATES; COSTS
Availability: NTSIS

<511>
Rabe, P.T.
Environmental Impact Center Inc.
Address: 55 Chapel Street, Newton, MA 02158
Title: Dynamic Models of the U.S. Automobile Fleet
1977, August
Sponsor: U.S. Dept. of Transportation, Transportation System Center: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Systems Development and Technology, Office of Systems Engineering
KEYWORDS: MODELS; SALES; COMPUTERIZED SIMULATION; GASOLINE; PRICES; FORECASTING; DEMAND (ECONOMICS); TRANSPORTATION; AUTOMOBILES; PRICES; SIZE; OWNERS
Availability: NTSIS

<512>
Richterich, K.G.
Society
Address: Box 5456, Santa Barbara, CA 93108
Title: Technical and Economic Considerations of the Use of Self-Supporting Plastic Sandwich Constructions in Electrical Vehicles
1975, December
Sponsor: National Aeronautics and Space Administration
KEYWORDS: ELECTRIC VEHICLES; PLASTICS; ECONOMIC ANALYSIS; PRODUCTION; DESIGN
Availability: NTSIS

<513>
Richterich, K.G.
Title: Transportation Policies and Energy Conservation
1976
KEYWORDS: TRANSPORTATION; ENERGY CONSERVATION; POLICIES: TRANSPORTATION MODE CHOICE: FUEL CONSUMPTION; REGULATIONS: HIGHWAY TRANSPORTATION; SERVICES; CARGO
<513> CPTC:
TRANSPORTATION; PUBLIC TRANSPORTATION; RAIL TRANSPORTATION; URBAN TRANSPORTATION; AIR TRANSPORTATION; PIPELINE TRANSPORTATION; ECONOMIC IMPACT; INFRASTRUCTURE
AVAILABILITY: The Conservation Foundation, 1717 Massachusetts Avenue, N.W., Washington, DC 20036

<514> Rector, W.W.; Golob, T.P.
California, University of, Institute for Transportation Studies; General Motors Corp., Research Laboratories, Transportation and Urban Analysis Dept., ADDRESS: CN, Irvine, CA; GCR,Marcos, MI 48000
TITLE: A Non-Commercial Model of Transportation Behavior Based on Sequential Consideration of Attributes
Report No. ORNL-2627, 23 p., 1979, January 10
KEYWORDS: TRANSPORTATION; MODELS; BEHAVIOR; DECISIONS; ATTITUDES; SHOPPING TRIPS; URBAN TRANSPORTATION; VEHICLES

<515> Recreation Vehicle Industry Association
ADDRESS: 500 204, 14450 Lee Rd., Chantilly, VA 20151
TITLE: BY Financial Facts
Quarterly publication, approximately 6 p.
KEYWORDS: FINANCIAL DATA; RECREATION VEHICLES; PRODUCTION; SALES; INDUSTRIES; INFORMATION

<516> Recreation Vehicle Industry Association
ADDRESS: 500 204, 14450 Lee Rd., Chantilly, VA 22021
1977
SPONSOR: Mitchell, Hutcheson Inc.
KEYWORDS: RECREATION VEHICLES; FORECASTING; TRAILERS; CAMPERs; MOTOR HOMES; TABLES (DATA); SALES

<517> Recreation Vehicle Industry Association
ADDRESS: 14450 Lee Rd., Chantilly, VA 22020
Annual publication, 9 p., 1977
KEYWORDS: RECREATION; FORECASTING; RECREATION VEHICLES; INDUSTRIES; PRICES; PRODUCTION; SALES; HANDBOOK; TABLES (DATA); GRAPHS (CHARTS); ENERGY DEMAND; MOTOR HOMES; TRAILERS; CAMPERs; TRUCKs; REGIONAL ANALYSIS

<518> Read, W.H.; Rook, N.; Wolfe, H.; DiGregorio, J.
U.S. Dept. of Transportation, Transportation Systems Center, ADDRESS: Kendall Square, Cambridge, MA 02142
TITLE: A Study of the Costs and Benefits Associated with APH
SPONSOR: U.S. Dept. of Transportation, Urban Mass Transportation Administration, Office of Technology Development and Deployment
KEYWORDS: TRANSPORTATION; TECHNOLOGY; COSTS; MAINTENANCE; OPERATING COSTS; USES (VEHICLES); MARKETS; BENEFIT COST ANALYSIS; TABLES (DATA); GRAPHS (CHARTS); ENERGY CONSERVATION; MONITORING; AUTOMATIC VEHICLE MONITORING; URBAN TRANSPORTATION; AUTOMOTIVE FLEETS
AVAILABILITY: NTS

<519> Regional Plan Association
ADDRESS: 235 East 45 Street, New York, NY 10017
TITLE: Where Transit Works: Urban Densities for Public Transportation
Regional Plan News No. 99, 24 p., 1976, August
SPONSOR: Tri-State Regional Planning Commission; N.Y. Dept. of Transportation, Urban Mass Transportation Administration; Ford Foundation; Rockefeller Foundation
KEYWORDS: URBAN AREAS; PUBLIC TRANSPORTATION; COSTS; USES (VEHICLES); RAPID TRANSIT; SYSTEMS; COMPUTERS; COMMUNITY DEVELOPMENT; LAND USE; PHOTOGRAPHS; GRAPHS (CHARTS)

<520> Requerio, J.F.
John Deere Product Engineering Center
ADDRESS: Moline, IL 61265
TITLE: Engine Development and Agricultural Equipment Fuel Consumption Trends
Paper No. 760853, published in SAE SP-111, 1-10, 1976, August
SPONSOR: Society of Automotive Engineers Inc., Milwaukee Section
KEYWORDS: FARM EQUIPMENT; TRACTORS; AGRICULTURE; DIESEL ENGINES; FUEL CONSUMPTION; DESIGN; PRODUCTION; GRAPHS (CHARTS)
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15086 for SAE SP-411

<521> Reischman, S.
Hebrew University
ADDRESS: Jerusalem, Israel
TITLE: Conceptual Problem in Evaluation of Travel Time
Paper published in Transportation Research Record 587, 24-29, 1976
SPONSOR: National Academy of Sciences, Transportation Research Board
KEYWORDS: TRAVEL TIME; ECONOMIC ANALYSIS; CUSTOMERS; BEHAVIOR; RESEARCH
AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave., NW, Washington, DC 20418 $2.40 for Transportation Research Record 587
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Beilman, S.; Stopher, P.R.
Andrew University; Cornell University
ADDRESS: 11. J. Setales, Park; CM, Ithaca, NY
TITLE: Applications of Value of Time to Travel Demand Estimation
Paper published in Transportation Research Record 507, 6-11
1976
SPONSOR: National Academy of Sciences,
Transportation Research Board
KEYWORDS: VALUE; TIME; TRAVEL DEMAND
AVAILABILITY: National Academy of Sciences,
Transportation Research Board, 2101
Constitution Avenue, NW, Washington, DC 20418
82.40 for Transportation Research Record 507

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Keeley, J. J.
Capital District Transportation Authority
ADDRESS: Albany, NY
TITLE: Transit Costs During Peak and Off-Peak Hours
Paper presented at the 1977 Annual Meeting of the
Transportation Research Board, held in
Washington, DC, January 1977
1977, January
KEYWORDS: TRANSIT; COSTS; PEAK; OFF-PeAK

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Keeley, J. J.; Miswell, B. M.; Reide, C. H.
Brookhaven National Laboratory, Dept. of Applied
Science
ADDRESS: Upton, NY 11973
TITLE: Motor Vehicle Storage of Hydrogen Using
Metal Hydrides. Final Report
Report No. TEC-75/001, 80 p.
1976, October
SPONSOR: Energy Research and Development
Administration, Division of Transportation
Energy Conservation
KEYWORDS: HYDROGEN; HYDROGEN STORAGE; HYDRIDES; METAL HYDRIDES; MAGNETIC STORAGE; ALTERNATIVE FUELS; DESIGN; STABILITY; COMPARATIVE EVALUATIONS; TABLES (DATA) (587); DIAGRAMS; ALTERNATIVE FUELS
AVAILABILITY: NTIS

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Keele, P. A.
Institute for Energy Analysis
ADDRESS: Oak Ridge, TN 37830
TITLE: The Total Energy Cost of Freight Transport
1977, February
SPONSOR: Energy Research and Development
Administration
KEYWORDS: COSTS; ENERGY CONSUMPTION; CARGO
TRANSPORTATION; HOT ENERGY; BAIL
TRANSPORTATION; WATER TRANSPORTATION; TRAINS;
INTENSITY TRANSPORTATION; AIR TRANSPORTATION;
INPUT-OUTPUT ANALYSIS; COMPARATIVE EVALUATIONS

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Keshavan, Y.; Friedenberg, R. L.; Levine, R.
U. S. Department of Commerce, Bureau of Economic
Analysis
ADDRESS: Washington, DC
TITLE: Work-Force Migration Patterns, 1970-76
Reprint from Survey of Current Business, February
1970-76, February
KEYWORDS: MIGRATION; EMPLOYMENT; REGIONAL
ANALYSIS; SOCIO-ECONOMIC FACTORS; EARNINGS;
TABLES (DATA); LABOR MIGRATION; URBAN AREAS;
STATE ANALYSIS; RURAL AREAS

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Rice, P.L.
Oak Ridge National Laboratory, Energy Division,
Regional and Urban Studies Section
ADDRESS: Oak Ridge, TN 37830
TITLE: Energy Conditions in the South
1976, December
SPONSOR: Energy Research and Development
Administration
KEYWORDS: ENERGY DEMAND; ENERGY SUPPLIES; ENERGY
RESOURCES; TABLES (DATA); NATURAL GAS; PETROLEUM; COAL; HYDROELECTRIC POWER; NUCLEAR
POWER; PETROLEUM PRODUCTS; ALABAMA; KANSAS;
FLORIDA; GEORGIA; KENTUCKY; LOUISIANA; MISSISSIPPI; NORTH CAROLINA; OKLAHOMA; SOUTH CAROLINA; TENNESSEE; TEXAS; VIRGINIA; WIS
VIRGINIA; SOUTHERN STATES; REGIONAL ANALYSES;
STATE ANALYSIS
AVAILABILITY: NTIS

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Rice, P.L.
Oak Ridge National Laboratory, Energy Division,
Economic Analysis Section
ADDRESS: Oak Ridge, TN 37830
TITLE: 1975 Energy Conditions in the South
1978, March
SPONSOR: U.S. Dept. of Energy
KEYWORDS: SOUTHERN STATES; STATE ANALYSIS; ENERGY
SUPPLIES; NATURAL GAS; PETROLEUM; COAL;
ENERGY RESERVES; ENERGY CONSUMPTION; REGIONAL
ANALYSIS; HYDROELECTRIC POWER; RESIDENTIAL
SECTOR; COMMERCIAL SECTOR; INDUSTRIAL SECTOR;
TRANSPORTATION; ELECTRIC UTILITIES; PRODUCTION; TABLES (DATA); ENERGY DEMAND;
ELECTRIC POWER DEMAND
AVAILABILITY: NTIS

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Rice, R.C.
Toronto, University of, Dept. of Civil Engineering
ADDRESS: Toronto, Canada
TITLE: Evaluation of Road and Transit System
Requirements for Alternative Urban Forms
Paper prepared for presentation at the Annual
Meeting of the Transportation Research Board, 29
p.
1978, January
KEYWORDS: URBAN AREAS; LAND USE; MODELS;
TRANSPORTATION; PLANNING; TRAVEL; VEHICLE
TRIPS

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Ridell, P.R.; Oliver, R.C.; Weichensbach, R.P.
Institute for Defense Analyses, Science and
Technology Division
ADDRESS: 400 Army-Mary Drive, Arlington, VA 22202
TITLE: DOD Energy R & D - Part II: Military
Availability

Report presented at the 54th Annual Meeting of the Transportation Research Board, held in "Transportation Energy Conservation and Demand," Transportation Research Record 561, 12-22
1976
SPOKES: U.S. Dept. of Transportation, Office of University Research
KEYWORDS: RURAL AREAS; RURAL TRANSPORTATION; RAIL TRANSPORTATION; FOOD; TRANSPORTATION; SOCIETAL-ECONOMIC VARIABLES; RAILROADS; MAPS; IOWA; ELECTRIC POWER GENERATION; AGRICULTURE; REGIONAL ANALYSIS; LIFE STYLE; STATE GOVERNMENT; GOVERNMENT POLICIES

Availability: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418
$5.00 for Transportation Research Record 561

COST
Fuel Options—Performance and E & D Implications
1977, March
KEYWORDS: MILITARY; FUELS; CONSUMPTION; ENERGY MANAGEMENT; FUELING; PETROLEUM; SYNTHETIC FUELS; AVIATION FUELS; TABLES (DATA); OIL SHALE; HYDROCARBONS; ALTERNATIVE FUELS;
RESEARCH: DEVELOPMENT; ENGINES; TRANSPORTATION

Availability: NTIS

COST
General Motors Corp., Chevrolet Engineering; General Motors Corp., Research Laboratories
ADDRESS: Warren, MI 48090
TITLE: Engine Control Optimization for Best Fuel Economy with Emission Constraints
1977, March
SPONSOR: Society of Automotive Engineers
KEYWORDS: FUEL ECONOMY; COMPUTER PROGRAMS; AUTOMOTIVE EMISSIONS; TESTING; ENGINES; CATALYTIC CONVERTERS; TABLES (DATA); COMPARATIVE EVALUATIONS; PERFORMANCE; GRAPHS (CHARTS); OPTIMIZATION; AUTOMOTIVE EMISSION CONTROL

Availability: Society of Automotive Engineers, Inc., 409 Commonwealth Drive, Warrendale, PA 15096

COST
Hinde, J.A.; Chow, Y.T.; Stone, N.G.
Lawrence Livermore Laboratory
ADDRESS: University of California, Livermore, CA 94550
TITLE: Composite Fiber Plywood for Energy Storage
1976, October
SPONSOR: Energy Research and Development Administration
KEYWORDS: FIBERGLASS; ENERGY STORAGE; COMPOSITE MATERIALS; FIBERS; DESIGN; DEVELOPMENT; UTILIZATION; HYBRID ELECTRIC-POWERED VEHICLES; LAWRENCE LIVERMORE LABORATORY; PHYSICAL PROPERTIES; RESEARCH PROGRAMS; TABLES (DATA); GRAPHS (CHARTS)

COST
Wong, S.L.; Tewer, K.A.; Butler, D.L.
Iowa State University, Civil Engineering and Engineering Research Institute
ADDRESS: Ames, IA
TITLE: Evaluation of Interaction Between Rural Regional Transportation and Energy

Availability

Report presented at the 54th Annual Meeting of the Transportation Research Board, held in "Transportation Energy Conservation and Demand," Transportation Research Record 561, 12-22
1976
SPOKES: U.S. Dept. of Transportation, Office of University Research
KEYWORDS: RURAL AREAS; RURAL TRANSPORTATION; RAIL TRANSPORTATION; FOOD; TRANSPORTATION; SOCIETAL-ECONOMIC VARIABLES; RAILROADS; MAPS; IOWA; ELECTRIC POWER GENERATION; AGRICULTURE; REGIONAL ANALYSIS; LIFE STYLE; STATE GOVERNMENT; GOVERNMENT POLICIES

Availability: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418
$5.00 for Transportation Research Record 561

COST
Roberts, F.O.
Massachusetts Institute of Technology, Center for Transportation Studies
ADDRESS: Cambridge, MA 02139
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COST.
TITLE: Factors Influencing the Demand for Goods Movement
1975, September
SPONSOR: U.S. Dept. of Transportation, Office of University Research
KEYWORDS: CARGO TRANSPORTATION; MARKET; DISTRIBUTION; COSTS; CONSUMERS; DEMAND (ECONOMIC); FORECASTING; RATES (CHARGES); INVENTORIES; TABLES (DATA); ECONOMIC ANALYSIS; MODELS; SYSTEMS ANALYSIS; COMMODITIES

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Roberts, P.O.
Massachusetts Institute of Technology, Center for Transportation Studies
ADDRESS: Cambridge, MA 02139
TITLE: Forecasting Freight Flows Using a Disaggregate Freight Demand Model
CCTS Report No. 76-1, 26 p.
1976, January
SPONSOR: Federal Energy Administration
KEYWORDS: FORECASTING; CARGO TRANSPORTATION; MATHEMATICAL MODELS; COSTS; TARIFFS; COMMODITIES; DEMAND (ECONOMIC); PLANNING; RATES (COSTS)

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Roberts, P.O.
Massachusetts Institute of Technology, Center for Transportation Studies
ADDRESS: Cambridge, MA 02139
TITLE: Developing Freight Origin-Destination Data for Use in Freight Planning
Report No. CCTS 76-2, 18 p.
1976, February
SPONSOR: U.S. Dept. of Transportation, Transportation System Center
KEYWORDS: CARGO TRANSPORTATION; SHIPMENTS; DATA ACQUISITION; COMMODITIES; SHIPMENTS; MODELS; DATA COMPIATION; COSTS; TABLES (DATA); TRANSPORTATION; PLANNING; DEMAND (ECONOMIC); DISTANCE

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Roberts, P.O.; Ferrier, H.B.; Eames, J.T.; Wilson, L.B.; Stasson, R.D.; Chiang, D.S.; Typhoon, C.T.
Massachusetts Institute of Technology, Center for Transportation Studies
ADDRESS: Cambridge, MA 02139
TITLE: Analysis of the Incremental Cost and Trade-offs Between Energy Efficiency and Physical Distribution Effectiveness in Intercity Freight Markets
CCTS Report No. 76-14, 178 p.
1976, September
SPONSOR: Federal Energy Administration, Office of Transportation Policy Research
KEYWORDS: EFFICIENCY; CARGO TRANSPORTATION; COSTS; MODELS; FORECASTING; TRAFFIC; RAIL TRANSPORTATION; TRAVEL TIME; DELAYS; TARIFFS; FUEL CONSUMPTION; RAILWAY TRANSPORTATION; SHIPMENTS; FUEL ECONOMY; TURFAGE; TABLES (DATA); COMMODITIES

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Robinson, E.; Ramey, S.P.

U.S. Dept. of Commerce, National Bureau of Standards, Institute of Basic Standards
ADDRESS: Washington, DC 20234
TITLE: Evaluation of Automotive Fuel Flowmeters
1977, June
SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Systems Development and Technology
KEYWORDS: AUTOMOBILES; FUEL ECONOMY; MEASURING INSTRUMENTS; FUEL CONSUMPTION; TESTING; DIAGRAMS
AVAILABILITY: NTIS: also available from DFO, Stock No. 003-003-01759-0

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Roche, G.; Lago, A.M.
RMC Research Corp.
ADDRESS: Bethesda, MD
TITLE: Intercity Passenger Transportation: Mode/Energy Conservation Volume II: Analysis
1975, December
SPONSOR: Council on Environmental Quality; Federal Energy Administration
KEYWORDS: ENERGY CONSERVATION; PASSENGER TRANSPORTATION; INTENSITY TRANSPORTATION; MODELS; FORECASTING; SOCIETAL-ECONOMIC FACTORS; TRAVEL; NOISE (SOUND); AIR POLLUTION; ACCIDENTS; LAND USE; OPERATING COSTS; SPEED LIMITS; GASOLINE; TAXES
AVAILABILITY: NTIS

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Roche, G.; Lago, A.M.
RMC Research Corp.
ADDRESS: Bethesda, MD
TITLE: Intercity Passenger Transportation: Mode/Energy Conservation Volume II: Executive Summary
1975, December
SPONSOR: Council on Environmental Quality; Federal Energy Administration
KEYWORDS: INTENSITY TRANSPORTATION; GOVERNMENT POLICIES: MODELS; FUEL ECONOMY; TAXES; ENERGY CONSERVATION; ECONOMICS; STATISTICS; VEHICLE MILE TRAVELED; FORECASTING; TRANSPORTATION MODEL CHOICE
AVAILABILITY: NTIS

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Rockwell International, Space Division
ADDRESS: Camarillo, CA
TITLE: Economic and Technical Feasibility Study for Energy Storage Flywheels
1975, December
SPONSOR: Energy Research and Development Administration, Division of Conservation Research and Technology
KEYWORDS: FEASIBILITY; FLYWHEELS; ENERGY STORAGE; TABLES (DATA); TECHNOLOGY; FORECASTING; ECONOMICS; UTILIZATION; TRANSPORTATION; ELECTRIC VEHICLES; COMMERCIAL SECTOR; INDUSTRIAL SECTOR; RESEARCH; DESIGN; RESIDENTIAL SECTOR; HYBRID ELECTRIC-POWERED VEHICLES; ELECTRIC VEHICLES; INSTITUTIONAL FACTORS; SAFETY; GRAPHS (CHARTS); DIAGRAMS
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Roehle, R.J.; Matallis, K.L.
National Aerodynamics and Space Administration, NASA Ames Research Center
ADRESSES: Cleveland, OH 44135
1976, July
SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation
KEYWORDS: GAS TURBINE ENGINES; PERFORMANCE; US DOG; AUTOMOBILES; AERODYNAMICS; VELOCITY; TESTING; ENGINE; EFFICIENCY; EQUIPMENT; MEASUREMENT; PRESSURE REDUCTION; GRAPHS (CHARTS); TEMPERATURE; TORQUE
AVAILABILITY: STIS

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Royle, D.A.; Keyser, J.; Duffy, T.R.
International Harvester Co., Solar Division
ADRESSES: 2200 Pacific Highway, San Diego, CA 92138
1975, July
SPONSOR: U.S. Environmental Protection Agency, Office of Air and Waste Management, Office of Mobile Source Air Pollution Control, Alternative Automotive Power Systems Division; Energy Research and Development Administration, Division of Transportation Energy Conservation
KEYWORDS: HYDROGEN; AUTOMOBILES; MAGNESIUM HYDRIDES; ENERGY STORAGE; ALTERNATE FUELS; MAGNESIUM ALLOYS; RESEARCH; HYDROGEN; TESTING; THERMAL DATA; GRAPHS (CHARTS); HYDROGEN STORAGE
AVAILABILITY: STIS

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U.S. Dept. of Transportation, Transportation Systems Center
ADRESSES: Kendall Square, Cambridge, MA 02142
1978, February
SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation
KEYWORDS: HYBRID ELECTRIC-POWERED VEHICLES; INSTITUTIONAL FACTORS; LEGISLATION; TAXES; REGULATIONS; ELECTRIC VEHICLES; TRAFFIC CONTROL; GOVERNMENT POLICIES; AUTOMOBILE INDUSTRY; ELECTRIC POWER; BATTERY CHARGING; VEHICLE RASING; TABLES (DATA); RESIDUAL ANALYSIS; PRICES; FUELS (COSTS); PETROLEUM; URBAN APES
AVAILABILITY: STIS

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Roome, J.A.; Woldridge, G.A.
Borg Warner Inc., Advanced Transportation Systems
ADRESSES: Costa Mesa, CA 92626
1978, April
SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation, Electric and Hybrid Vehicle Systems Program; National Aeronautics and Space Administration, Lewis Research Center
KEYWORDS: ELECTRIC VEHICLES; DESIGN; POWER TRAIN SYSTEMS; PERFORMANCE; ELECTRIC VEHICLE RANGE; DRIVING CYCLE; EFFICIENCY; AUTOMOTIVE ENGINEERING; TESTING; SIMULATION
AVAILABILITY: STIS

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Rosenthal, S.B.; Harniute, J.D.; Vlahos, B.P.
Boston University, School of Management
ADRESSES: Boston, MA 02215
1977
SPONSOR: U.S. Dept. of Transportation, Urban Mass Transportation Administration
KEYWORDS: MAINTENANCE; COST ANALYSIS; SCHEDULING; RAIL TRANSPORTATION; MODELS; PLANNING
AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418
$2.20 for Transportation Research Record 627

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Rommel, R.N.; Photo, E.; Nyquist, J.A.; Linnemann, A.; Lundhola, J.; et al.
Engelbrecht (Sweden) AB & Co.
ADRESSES: Sweden
173. The Development of a 150 kW (200 HP) Stirling Engine for Heavy Duty Automotive Application—A Status Report

SPONSOR: Society of Automotive Engineers
KEYWORDS: STIRLING ENGINES; HEAT EXCHANGERS; PERFORMANCE; COSTS; DIESEL ENGINES; GRAPHS (CHARTS); COMPARATIVE EVALUATIONS; FUEL CONSUMPTION; FUEL ECONOMY; NOISE; DIAGRAMS; CONTROL EQUIPMENT
AVAILABILITY: Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096

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Rousell, R.; Berry, W.
Airsearch Manufacturing Co.
ADRESSES: Terrance, CA
1977, August
SPONSOR: Energy Research and Development Administration, Division of Transportation Energy Conservation
KEYWORDS: ELECTRIC VEHICLES; DESIGN; PERFORMANCE; SAFETY; BATTERIES; TABLES (DATA); GRAPHS (CHARTS); DIAGRAMS; ENERGY STORAGE; ECONOMICS; COSTS; DEVELOPMENT; MODELS; SIMULATION; LIFE-CYCLE COST; TRANSPORTATION
AVAILABILITY: STIS
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CONTRIBUTORS: BUSES (VEHICLES); ATTITUDES;
QUESTIONNAIRES
AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418
83.20 for Transportation Research Record 625

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Schwarz, R.
ASL Engineering Inc.
ADDRESS: 495 South Fairview Avenue, Coleta, CA 90237
TITLES: Near-Term Electric Vehicle Program. Phase I, Final Report
Report No. SAN/1295-1, 304 p., 1987, August
SPONSOR: Energy Research and Development Administration, Division of Transportation Energy Conservation
KEYWORDS: ELECTRIC VEHICLES; DESIGN; PATTERNS; PERFORMANCE; TABLES (DATA); GRAPHS (CHARTS); DIAGRAMS; LIFE-CYCLE COST; COSTS; EFFICIENCY; ENERGY STORAGE; URBAN TRANSPORTATION; ENERGY CONSUMPTION; ENERGY CONSERVATION; WEIGHT
AVAILABILITY: NTIS

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Saros, R.
Research Institute for Rotating Electrical Machines
ADDRESS: Brno, Czechoslovakia
TITLES: Development of Electric Vehicles in Czechoslovakia
Paper presented at the Fourth International Electric Vehicle Symposium, held in Hannover, Germany, August 31 - September 2, 1976, 12 p., 1976, September
SPONSOR: Electric Vehicle Council; International Union of Producers and Distributors of Electrical Energy
KEYWORDS: ELECTRIC VEHICLES; DEVELOPMENT; CZECHOSLOVAKIA; BUSES (VEHICLES); CONTROL SYSTEMS
AVAILABILITY: NTIS

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Savilan, V.A.; Salinano, F.J.
Brookhaven National Laboratory
ADDRESS: Upton, NY
TITLES: System Study of Two Synthetic Transportation Fuel Options
SPONSOR: Energy Research and Development Administration
KEYWORDS: ALTERNATE FUELS; COIL; HYDROGEN; STEAM; SYNTHETIC FUELS; FORECASTING; ENVIRONMENTAL IMPACT; TRANSPORTATION
AVAILABILITY: NTIS

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Shahin, A.A.
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Avenue, Washington, DC 20418
TITLES: Railroad Electrification: The Issues
Transportation Research Board Special Report 180, 88 p., 1977
KEYWORDS: RAIL TRANSPORTATION; RAILROADS; ELECTRIC RAIL SYSTEMS; CONFERENCES; EQUIPMENT; COSTS; ELECTRIC POWER DEMAND; FINANCING; PLANNING; CAPITAL COSTS; MAINTENANCE; ECONOMIC ANALYSIS
AVAILABILITY: 83.80

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Shaw, H.L.; Wood, R.K.
Logistics Management Institute
ADDRESS: Washington, DC
TITLES: Volumes and Transportation Costs of Fossil Fuels Shipped Between Census Regions
Report No. NHE-21995, 50 p., 1976, October
SPONSOR: Brookhaven National Laboratory, National Center for Analysis of Energy Systems, Economic Analysis Division; Energy Research and Development Administration, Administrator for Planning, Analysis, and Evaluation
KEYWORDS: PETROLEUM; COSTS; COIL; TRANSPORTATION; NATURAL GAS; REGIONAL ANALYSIS; ENERGY CONSUMPTION; MODELS; ENERGY SYSTEMS; SIMULATION; ENERGY SUPPLIES; GRAPHS (CHARTS); SUPPLY (ECONOMIC)
AVAILABILITY: NTIS

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Shelton, E.R.
Energy Research and Development Administration, Battelleville Energy Research Center
ADDRESS: Battelleville, OK
TITLES: Motor Gasoline, Winter 1976-77
Report No. BFS/PPS-77/3, 89 p., 1977, June
KEYWORDS: GASOLINE; SURVEYS; TABLES (DATA); GRAPHS (CHARTS); DISTILLATION; UNLEADED AUTOMOTIVE FUELS; OCTANE; BAK; MARKETING; TRENDS; PHYSICAL PROPERTIES
AVAILABILITY: NTIS

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Shelton, E.R.
O.S. Dept. of Energy, Battelleville Energy Research Center
ADDRESS: Battelleville, OK
TITLES: Diesel Fuel Oil, 1977
Report No. BFS/PPS-77/5, 30 p., 1977, November
KEYWORDS: DIESEL FUELS; FUEL OIL; TABLES (DATA); GRAPHS (CHARTS); REGIONAL ANALYSIS; SURVEYS; CHEMICAL PROPERTIES; CHEMICAL COMPOSITION; TESTING
AVAILABILITY: NTIS

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Shelton, E.R.
U.S. Dept. of Energy, Battelleville Energy Research Center
ADDRESS: Battelleville, OK
TITLES: Motor Gasoline, Summer 1977
Report No. BFS/PPS-77/1, 90 p., 1978, January
KEYWORDS: GASOLINE; SURVEYS; TABLES (DATA); GRAPHS (CHARTS); DISTILLATION; BAK
F.S. Dept. of Energy, Battelle Energy Research Center
Address: Battelleville, OH
Title: Aviation Turbine Fuels, 1977
Report No. BESC/77-70/2, 13 p.

Key Words: Aviation Fuels; Jet Engine Fuels; Comparative Evaluations; Statistics; Chemical Properties
Availability: NTIS

Silleran, J.B. (ed.)
National Academy of Sciences, National Research Council, Transportation Research Board
Address: 2101 Constitution Ave. NW, Washington, DC 20418
Title: Value of Travel Time
Transportation Research Record 567, 41 p.
1978
Keywords: Travel Time; Transportation; Vehicle Trips; Prices; Planning Models; Passenger Transportation; Costs; Intercity Transportation; Behavior; Users; Economic Analysis; Benefit-Cost Analysis; Cost Effectiveness; Traffic; Precedence; Mobility
Availability: $2.00

Shumaker, D.N.
Oak Ridge National Laboratory, Energy Division, Regional and Urban Studies Section
Address: Oak Ridge, TN 37830
Title: Characterization of Automotive Fleets in the United States: 1966-1977
1978, September
Keywords: U.S. Dept. of Energy, Division of Transportation Energy Conservation; Automotive Fleets; Automobiles; Inventories; Purchasing; Fuel Economy; Ownership; Supply; Tables (Data); Size; Vehicle Registrations; Vehicle Mileage
Availability: NTIS

Shumka, D.N.; Lobeck, A.R.; Patterson, P.D.; O'Connor, T.F.; Ogle, K.C.; HOME, A.B.; Green, D.L.
Oak Ridge National Laboratory, Energy Division, Regional and Urban Studies Section
Address: Oak Ridge, TN 37830
Title: Transportation Energy Conservation Data Book: Edition 2
1977, October
Keywords: Energy Research and Development Administration, Division of Transportation Energy Conservation; Energy Conservation; Highway Transportation; Air Transportation; Rail Transportation; Pipeline Transportation; Statistics; Tables

Sinneman, J.B. (ed.)
National Academy of Sciences, National Research Council, Transportation Research Board
Address: 2101 Constitution Ave. NW, Washington, DC 20418
Title: Transportation Energy Conservation and Demand
Transportation Research Record 561, 6 reports prepared for the 54th Annual Meeting of the Transportation Research Board, 71 p.
1978
Keywords: Transportation; Energy Conservation; Energy Demand; Demand (Economics); Conferences; Meetings; Urban Transportation; Attitudes; Energy Shortages; Rural Areas; Conferences, National Academy of Sciences, National Research Council, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418
Title: Transportation Energy Conservation and Demand
Transportation Research Record 561, 6 reports prepared for the 54th Annual Meeting of the Transportation Research Board, 71 p.
1978
Keywords: Transportation; Energy Conservation; Energy Demand; Demand (Economics); Conferences; Meetings; Urban Transportation; Attitudes; Energy Shortages; Rural Areas; Conferences, National Academy of Sciences, National Research Council, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418
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Keywords: Transportation; Energy Conservation; Energy Demand; Demand (Economics); Conferences; Meetings; Urban Transportation; Attitudes; Energy Shortages; Rural Areas; Conferences, National Academy of Sciences, National Research Council, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418
Title: Transportation Energy Conservation and Demand
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ADDRESS: SEC, 1146 Chestnut Street, Philadelphia, PA 19107; 8-4, 4733 Bethesda Ave., Bethesda, MD 20014
TITLE: Transurban Public Testing and Evaluation Program
1976, January
SPONSOR: U.S. Dept. of Transportation, Urban Mass Transportation Administration
KEYWORDS: TRANSIT; TESTING; BUSES (VEHICLES); PUBLIC OPINION; QUESTIONNAIRES; SURVEYS;
DATA (DATA); TRANSPORTATION DISADVANTAGED; PHOTOGRAPHS; PASSENGER TRANSPORTATION
AVAILABILITY: NTSI

Sklarz, L.P.
U.S. Department of Transportation, Federal Highway Administration
TITLE: Comparative Costs of Urban Transportation Systems
Final Report, 100 p.
1978, June
KEYWORDS: COSTS; URBAN TRANSPORTATION; TRANSPORTATION SYSTEMS; COMPARATIVE EVALUATIONS; TRAVEL TIME; PLANNING; TRANSPORTATION MODE CHOICE; TABLES (DATA); GRAPHS (CHARTS)
AVAILABILITY: GPO, Stock No. 050-001-00317-3

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Sevel Motors Corp., Research Laboratories, Physics Dept., Environmental Activities Staff
ADDRESS: Rose, MI
TITLE: Tire Rolling Resistance - A Speed Dependent Contribution
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KEYWORDS: TIRES; VELOCITY; MODELS; FUEL ECONOMY; AUTOMOBILES; FRICTION
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096 $2.50

Sobel, R.L.; Batchelder, J.M.
Multisystem Inc., Transportation System Division
ADDRESS: Cambridge, MA
TITLE: Strategy for Implementing Integrated Regional Transit
Paper published in Transportation Research Record 625, 27-31
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SPONSOR: U.S. Dept. of Transportation, Research and Development Policy Analysis Division
KEYWORDS: URBAN TRANSPORTATION; PUBLIC TRANSPORTATION; PLANNING; OPERATING COSTS; MODELLING; PUBLIC OPINION
AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2001 Constitution Ave. NW, Washington, DC 20418
$3.20 for Transportation Research Record 625

Soltis, R.P.
Society of Automotive Engineers Inc.
ADDRESS: 400 Commonwealth Dr., Warrendale, PA 15096
TITLE: Automotive Fuel Economy (Selected SAE Papers 1965 - 1975)
1976
KEYWORDS: AUTOMOBILES; FUEL ECONOMY; TESTING; FUEL CONSUMPTION; UTILIZATION; DEFRACTION; DESIGN; LUBRICANTS; OIL

Soltis, R.P.; Bosak, J.M.; Denlington, R.L.; Doettis, N.G.
TITL: Report on Tests of the Korosch Hybrid Passenger Vehicle

REPORT NO. NASA TM-X-73649, COR/1011-14, 68 p., 1976, June

SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation

KEYWORDS: ELECTRIC VEHICLES; HYBRID ELECTRIC-POWERED VEHICLES; TESTING;
ACCELERATION; ELECTRIC VEHICLE RANGE; PASSENGER TRANSPORTATION; FUEL ECONOMY; SPARK IGNITION ENGINE; PERFORMANCE; DIAGNOSIS; GRAPHS (CHARTS); ENERGY CONSUMPTION

AVAILABILITY: NTS

TITL: Results of Baseline Tests of the Lucas Limousine

REPORT NO. NASA TM X-73649, 27 p., 1977, January

SPONSOR: Energy Research and Development Administration, Division of Transportation Energy Conservation

KEYWORDS: ELECTRIC VEHICLES; TESTING; DRIVE TRAIN SYSTEMS; BATTERY; PASSENGER TRANSPORTATION; DRIVING CYCLE; PERFORMANCE; RILASE; ENERGY CONSUMPTION; STANDARDS; PHOTOGRAPHS; GRAPHS (CHARTS); ELECTRIC VEHICLE RANGE

AVAILABILITY: NTS


REPORT NO. DOT/EIA-0062, 36 p., 1976, June

SPONSOR: PETROLEUM; PETROLEUM PRODUCTS; REQUIREMENTS; INTERNATIONAL ANALYSIS; REPORTS; REPORTS: PRICES; NATURAL GAS: TABLES (DATA): PETROLEUM REFINING: ENERGY DEMAND; OIL WELLS; CAPACITY

TITL: Identification of Probable Automotive Fuels Composition: 1965-2000 and Executive Summary

REPORT NO. EPA/CM-840-01/1, 218 p.; REPORT NO. EPA/CM-840-01/2 for Executive Summary, 55 p., 1978, May

SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation


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93 p., 1977, December

SPONSOR: U.S. Dept. of Commerce, Maritime Administration


AVAILABILITY: NTS

TITL: Conservation: The Centrifices

ADDRESS: Kendall Square, Cambridge, MA 02142

TITLE: A Computer Program (MOREQ) for Power Requirements of Mass Transit Vehicles

REPORT NO. DOT/TA-0-0044-77-2, DOT/TA-0-76-2, 68 p., 1977, August

SPONSOR: U.S. Dept. of Transportation, Urban Mass Transportation Administration, Office of Technology Development and Employment

KEYWORDS: COMPUTER PROGRAMS: RAIL TRANSPORTATION: COMPUTERIZED SIMULATION: ENERGY CONSUMPTION

AVAILABILITY: NTS

TITL: Transportation, Trucks and Fuel Conservation

PAPER PRESENTED AT THE FORTH WESTERN CONFERENCE ON MATERIALS TECHNOLOGY, HOTEL MACUTO-SHERATON, CARACAS, VENEZUELA, JUNE 29-JULY 4, 1975, 7 p.

SPONSOR: WESTERN RESEARCH INSTITUTE, AUTOMOTIVE RESEARCH DIVISION, DEPT. OF TRANSPORTATION RESEARCH

ADDRESS: SAN ANTONIO, TX

TITLE: TRANSPORTATION, TRUCKS AND FUEL CONSERVATION

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AVAILABILITY: NTS
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ADDRESS: 333Farmwood Avenue, Menlo Park, CA 94025
REPORT NO. EPRI NA-933, Research Project 759-1, 179 p.
1977, September
SPONSOR: Electric Power Research Institute
KEYWORDS: FUELS; PRICES; FORECASTING; COAL; CRUDE; PETROLEUM; NATURAL GAS; SYNTHETIC PETROLEUM; ELECTRIC POWER GENERATION; RESIDENTIAL SECTOR; COMMERCIAL SECTOR; INDUSTRIAL SECTOR; TRANSPORTATION; ENERGY TOXICITY; TAPES (DATA); ENERGY DEMAND

<598>
Stanford Research Institute
ADDRESS: Menlo Park, CA 94025
1977, February
SPONSOR: Electric Power Research Institute
KEYWORDS: ENERGY SUPPLIES; ENERGY ECONOMICS; ENERGY BALANCE; ENERGY DEMAND (ECONOMICS); PRICES; COSTS; TAPES (DATA); GRAPHS (CHARTS); RESIDENTIAL SECTOR; COMMERCIAL SECTOR; INDUSTRIAL SECTOR; TRANSPORTATION; FUELS; ENERGY CONVERSION; ECONOMICS
AVAILABILITY: Electric Power Research Institute, 333 Farmwood Ave., Menlo Park, CA 94025

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ADDRESS: Menlo Park, CA 94025
TITLE: Long-Term Energy Alternatives Proposals: Synthetic Fuel versus Battery/Electric System
REPORT NO. PB-262573, ESF/PR-7516162/1/6, V.P.
1976, August
SPONSOR: National Science Foundation, Division of Policy Research and Analysis
KEYWORDS: AUTOMOBILES; ALTERNATE FUELS; ELECTRIC VEHICLES; FORECASTING; CONSERVATION; COSTS; LIFE-CYCLE COST; ENERGY Economics; COAL; COAL CONVERSION; TAPES (DATA); UTILITIES; PRODUCTION; UTILIZATION; AUTOMOBILE ENERGY CONVERSION
AVAILABILITY: NBS

<600>
Steins, R.D.; Cooper, R.; Scheaffer, R.L.
O.R. Dept. of Transportation, Transportation Systems Center
ADDRESS: Kendall Square, Cambridge, MA 02142
TITLE: An Analysis of Transportation Planning Effectivecs
<1977, July>
SPONSOR: O.R. Dept. of Transportation, Urban Mass Transportation Administration, Office of Transportation Planning, Office of Planning and Finance
KEYWORDS: PLANNING; TRANSPORTATION; URBAN TRANSPORTATION; REGIONAL ANALYSIS; TABLES (DATA); TRANSPORTATION SYSTEMS; LOCAL

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Steinberg, A.J.; Cunningham, W.J.
Pennsylvania State University, Pennsylvania Transportation Research Board
ADDRESS: University Park, PA 16802
TITLE: An Experiment in Freight Model Choices: Delineating the Rail-Track Interface
1976, May
SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of University Research
KEYWORDS: CAPACITY TRANSPORTATION; RAILROAD; HIGHWAY TRANSPORTATION; TRUCKS; COMMODITIES; RAIL TRANSPORTATION; PLANNING MODELS; RAILWAY; COMPETITION; RATES (COSTS); TONNAGE; DISTANCE; CARGO (DATA); REGIONAL ANALYSIS; COMPARISONS; SURVEYS
AVAILABILITY: NBS

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Stopher, P.P.
Cornell University, Dept. of Environmental Engineering
ADDRESS: Ithaca, NY
TITLE: Applications of Value of Time to Economic Evaluation of Transport Investment Alternatives
PAPER PUBLISHED IN TRANSPORTATION RESEARCH RECORD 257, 19-23
1976
SPONSOR: National Academy of Sciences, Transportation Research Board
KEYWORDS: TRAVEL TIME; ECONOMIC ANALYSIS; BENEFIT COST ANALYSIS; EFFECTIVENESS; PLANNING
AVAILABILITY: National Academy of Sciences, Transportation Research Board, 200 Constitution Ave. NW, Washington, DC 20418
$2.40 for Transportation Research Record 567

<603>
Stopher, P.P.
Cornell University, Dept. of Environmental Engineering
ADDRESS: Ithaca, NY
TITLE: Derivation of Values of Time from Travel Demand Models
PAPER PUBLISHED IN TRANSPORTATION RESEARCH RECORD 257, 12-18
1976
SPONSOR: National Academy of Sciences, Transportation Research Board
KEYWORDS: MODELS; BENEFIT; TRAVEL TIME; VEHICLE TRIPS; PASSENGER TRANSPORTATION
AVAILABILITY: National Academy of Sciences, Transportation Research Board, 200 Constitution Ave. NW, Washington, DC 20418
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Streifel, R.L.
University of Maryland, University of
TITLE: Airline Demand Functions in the North Atlantic and Their Pricing Implications
JOURNAL OF TRANSPORT ECONOMICS AND POLICY, MAY 1976, 179-195
1976, May
KEYWORDS: AIR TRANSPORTATION; ECONOMETRIC MODELS;
Stucker, J.P.; Kilpatrick, R. J., Jr.
Purvis Systems Inc., Washington Operations
ADDRESSES: 1255 20th St. NW, Washington, DC 20007
TITLE: Statistical Report on Urban Energy Conservation

1977, June
SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of Transportation
Economic Analysis

SYSTEMS: CARGO TRANSPORTATION; ENERGY CONSUMPTION; GOVERNMENT POLICIES; URBAN AREAS; ENERGY RESOURCES; PRICES; PETROLEUM; GAS; ELECTRICITY; NATURAL GAS; COAL; INDUSTRIAL SECTOR; TRANSPORTATION

AVAILABILITY: NTIS

Sweeney, J.L.
Stanford University, Dept. of Engineering-Economic Systems
ADDRESS: Stanford, CA 94305

51 p.
1977, July
SPONSOR: Energy Research and Development Administration, Office of Conservation Planning Policy

KEYWORDS: GASOLINE; AUTOMOBILES; EFFICIENCY; GOVERNMENT POLICIES; ECONOMIC ANALYSIS; ELASTICITY (ECONOMICS); GPS; CONSUMERS

Sweeney, J.L.
Data Resources Inc., Energy Group
ADDRESS: Lexington, MA
TITLE: The Impact of the President's Proposed Gasoline Tax and Gas-Offerer Tax on Gasoline Consumption

Data Resources Inc., Energy Bulletin, 5-11
1977, August

KEYWORDS: GASOLINE; TAXES; AUTOMOBILES; EFFICIENCY; CONSUMERS

Systems Design Concepts Inc.: Brookhaven National Laboratory, National Center for Analysis of Energy Systems, Policy Analysis Division
ADDRESS: Bldg. 5115, Upton, NY 11973
TITLE: Transportation Energy Conservation and Conservation Policy Options in the Northeast

1977, March
SPONSOR: Energy Research and Development Administration, Division of Biomedical and Environmental Research

KEYWORDS: TRANSPORTATION; ENERGY CONSUMPTION; CONSERVATION; GOVERNMENT POLICIES; INFORMATION; AVAILABILITY: NTIS

Sweeney, J.L.
Data Resources Inc., Energy Group
ADDRESS: Stanford, CA 94305
TITLE: The Economic Impact of Automobile Travel Cost Increases on Households

Report No. 4-1984-R44/E, 81 p.
1977, July
SPONSOR: National Science Foundation; Federal Energy Administration

KEYWORDS: ENERGY CONSUMPTION; ENERGY DEMAND; GOVERNMENT POLICIES; GASOLINE; AIR QUALITY; FAMILY LIFE; COSTS; SOCIO-ECONOMIC FACTORS; INCOME; VEHICLE TRIPS; COST ESTIMATES; SURVEYS; AUTOMOBILES; OPERATING COSTS; ELASTICITY (ECONOMICS); OCCUPANCY; GRAPH (CHARTS); MAINTENANCE; FUEL ECONOMY

Availabillity: NTIS

Facina, R.
National Aeronautics and Space Administration, Lewis Research Center
ADDRESS: Cincinnati, OH 45235
TITLE: Experimental Evaluation of Premix-Prepressurizing Fuel Injection Concepts for a Gas Turbine Catalyst Combustor

1977, August
SPONSOR: Energy Research and Development Administration, Division of Transportation Energy Conservation

KEYWORDS: FUEL INJECTION SYSTEMS; AUTOMOBILES; ELASTICITY; GAS TURBINES; CATALYSTS; CORROSION; AUTOMOBILES

Availabillity: NTIS

Tepp, R.; Kappelius, A.
D.L. Dept. of Transportation, Transportation System Center
ADDRESS: Kendall Square, Cambridge, MA 02142
TITLE: Transportation Statistics and Information

1976, December
SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Policy, Plans and International Affairs, Office of Transportation System Analysis and Information

KEYWORDS: TRANSPORTATION; STATISTICS; GOVERNMENT POLICIES; INFORMATION; AVAILABILITY: NTIS

Faulsky, H., Faulsky Associates
ADDRESS: Canaan Street, Canaan, CT 06018
TITLE: British Airways: An Analysis of Efficiency and Cost Levels

Teclilology Study Panel

**Title:** The Need for and Deployment of Inexhaustible Energy Resource Technologies: Report of Technology Study Panel, Inexhaustible Energy Resources Study

1977, September

**Sponsor:** Energy Research and Development Administration

**Keywords:** Energy Resources; Solar Energy; Natural Gas; Electric Heating; Technology; Energy Demand; Energy Conversion; Cost Analysis; Supply (Economic); Graphs (Charts); Imports; Tables (Data); Synthetic Fuel Plants; Costs (Costs); Commercial Sector; Electric Power; Utilization; Transportation

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Teclilology Study Panel

**Title:** A Stirling Engine Computer Model for Performance


**Sponsor:** U.S. Dept. of Energy, Division of Transportation Energy Conservation

**Keywords:** Stirling Engines; Models; Performance; Transportation; Electric Power; Utilization; Transportation

**Availability:** GPO, Stock No. 575-139/1201

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Thermex Electron Corp.

**Address:** 101 First Avenue, Waltham, MA 02154

**Title:** Thermex Electron Corp.

**Sponsor:** U.S. Dept. of Transportation, Office of the Secretary, Air Transportation Policy Staff

**Keywords:** Efficiency; Costs; Tables (Data); United Kingdom; Statistics; Air Transportation; Revenue; Comparative Evaluation; Passenger Transportation; Operating Costs; Capital Costs; Cargo Transportation; USA; Production; Financial Data; Earnings; Profits

**Availability:** NTS.

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Thwaites, R. Wood, E., Jr.; London, W.

**Title:** Transportation in Small Historic Cities: Analysis, Strategies, and Recommendations


**Sponsor:** U.S. Dept. of Transportation, Office of University Research

**Keywords:** Modern; Traffic; Urban Areas; Urban Transportation; History; Local Government; Travel; Vehicle Trips; Recreation; Economic Impact; Environmental Impact; Social Impact; Institutional Factors; Salinas (Massachusetts); Mexicali (Virginia); Awaroski (Maryland); Newport (Rhode Island); Plymouth (Massachusetts); Maps

**Availability:** NTS

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Thompson, D.L.; Barth, J.; Caruthers, R.; Sears, S.

**Title:** Analysis of State and Local Taxation of American Railroads


**Sponsor:** National Science Foundation, Science and Technology Policy Office

**Keywords:** Railroads; Rail Transportation; Government Policies; Taxes; Allocations; Property Values; State Government; Regional Analysis; Tables (Data); Local Government

**Availability:** NTS

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Thommer, R.L.; Debrock, M.P.; Daffey-Armstrong, H.; Sandy, R.C.

**Title:** A Methodology for Making a Quantitative Assessment of Passenger Transportation Alternatives

Final Report, 137 p., 1977, April

**Sponsor:** Dept. of Defense, Naval Facilities Engineering Command, Office of Naval Research. Energy Research and Development Administration

**Keywords:** Passenger Transportation; Transportation Mode Choice; Land Use; Energy Conservation; Air Quality; Traffic; Energy Conservation; Computers; Costs; Highways; Models; Statistics; Input-Output Analysis; Computing

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Trow, W.L.; Geane, J.E.; Chilham, A.A.; Irving, P.D.

**Title:** Cost Estimates for the Commercial Manufacture of Lithium/Iron Sulfide Cells for Load-Leveling

Report No. MLM-75-12, 67 p., 1976, March

**Sponsor:** Energy Research and Development Administration, Division of Transportation Energy Conservation

**Keywords:** Costs; Lithium/Metal Sulfide Batteries; Load Management; Utilities; Manufacturing; Lithium-Aluminum/Metal Sulfide Batteries; Prices; Economics; Diagrams

**Availability:** NTS.
30TH-THIRD Yearbook, annual publication, 286 p. 1977
KEYWORDS: Trucks; INDUSTRIAL SECTOR; FINANCIAL DATA; STATISTICS; TABLES (DATA); MANPOWER; INTERCITY TRANSPORTATION; EQUIPMENT; BALANCE SHEET; EXPENSES; REVENUES; REGIONAL ANALYSIS; INCOME

The 30th Yearbook is a comprehensive resource covering all aspects of the trucking industry. It includes chapters on financial and manpower statistics, balance sheet and expense analysis, regional differences, country comparisons, and much more. It is a valuable reference for stakeholders in the trucking industry, including government agencies, manufacturers, and transportation companies.

Key Terms:
Trucks, Industry, Manpower, Statistics, Balance Sheet, Expenses, Revenues, Regional Analysis, Income.
G. S. Dept. of Energy
ADDRESS: Washington, DC 20585
TITLE: Electric and Hybrid Vehicle Program
Small Business Planning Grants
1978
KEYWORDS: ELECTRIC VEHICLES; HYBRID ELECTRIC-POWERED VEHICLES; HS DDR; FUNDING; PLANNING; RESEARCH

G. S. Dept. of Energy, Assistant Secretary for Conservation and Solar Applications; U. S. Dept. of Energy, Assistant Secretary for Environment
ADDRESS: Washington, DC 20585
TITLE: Environmental Development Plan (ODP); Transportation Energy Conservation, FY 1977
1978, March
KEYWORDS: PLANNING; TECHNOLOGY; TRANSPORTATION; HIGHWAY TRANSPORTATION; ELECTRIC VEHICLES; PROJECTS; HYBRID ELECTRIC-POWERED VEHICLES; ALTERNATE FUELS; SYNERGISTIC POLICIES; MEDIATION; HEAT; SAFETY; ENVIRONMENTAL IMPACT; DISCOUNT; STUDYING ENGINEERS; PIPELINE TRANSPORTATION; STRATIFIED CHANCE ENGINES; DRIVING CYCLE; FUEL CONSUMPTION; COMPARATIVE EVALUATIONS
AVAILABILITY: NTIS

G. S. Dept. of Energy, Assistant Secretary for Conservation and Solar Applications, Office of Business Assistance Programs
ADDRESS: Washington, DC 20585
TITLE: Voluntary Business Energy Conservation Program; Program Report No. 6
1979, April
KEYWORDS: INDUSTRIES; INDUSTRIAL SECTOR; ENERGY CONSERVATION; ENERGY CONSUMPTION; AVIATION; AUTOMOTIVE INDUSTRY; AGRICULTURE; CONSTRUCTION INDUSTRY; ENERGY DEMAND; AIR CONDITIONING; FUELS; GRAPHS (CHARTS)
AVAILABILITY: GPO, Stock No. 061-000-00052-6

G. S. Dept. of Energy, Assistant Secretary for Conservation and Solar Applications,
ADDRESS: Washington, DC 20585
TITLE: Proceedings of the Workshop on Urban Transportation
1978
SPONSOR: G. S. Dept. of Transportation: Federal Energy Administration; Tennessee, University of
KEYWORDS: CIVIL TRANSPORTATION; PLANNING; DEMAND (ECONOMIC); URBAN TRANSPORTATION; NAEL TRANSPORTATION; INTERNATIONAL TRADE; TRUSS; TUNNEL (TUNNEL); GRAPHS (CHARTS); WATER TRANSPORTATION; COMMODITIES; RATES (COST); SHIPMENTS; LAND USE; SOCIO-ECONOMIC FACTORS; ENVIRONMENTAL IMPACT; GOVERNMENT POLICIES; EMPLOYMENT

G. S. Dept. of Energy, Assistant Secretary for Energy Technology
ADDRESS: Washington, DC 20585
TITLE: Market-Oriented Program Planning Study (HOPS); Volume 1: Integrated Summary
1977, December
KEYWORDS: RESIDENTIAL SECTOR; COMMERCIAL SECTOR; TRANSPORTATION; INDUSTRIAL SECTOR; ENVIRONMENTAL IMPACT; SUPPLY (ECONOMIC); TABLES (DATA); TECHNOLOGY ASSESSMENTS; FOSSIL FUELS; COAL; SOLAR ENERGY; ENERGY CONSERVATION; ENERGY SUPPLIES; DEMAND (ECONOMIC); PLANNING; RENEW; ENERGY CONSUMPTION; NATURAL GAS; PETROLEUM; ELECTRIC POWER GENERATION; HEALTH; SAFETY; COMPARATIVE EVALUATIONS; GRAPHS (CHARTS); RESEARCH; COMMERCIALIZATION; FORECASTING

G. S. Dept. of Energy, Assistant Secretary for Energy Technology
ADDRESS: Washington, DC 20585
TITLE: Environmental Development Plan (ODP); Summary and Status of Environmental Development Plans, FY 1978
1978, April
KEYWORDS: SOLAR ENERGY; GEOTHERMAL ENERGY; FOSSIL FUELS; COAL UTILIZATION; ENERGY CONSERVATION; COAL LIQUEFACTION; TECHNOLOGY; RAGGOSTHERMODYNAMICS; COPPER; COAL; NUCLEAR ENERGY; BIOGEN; UNCONVENTIONAL ENERGY RESOURCES; PHOTOVOLTAIC CONVERSION; AIR POLLUTION; WATER POLLUTION; BUILDINGS; INDUSTRIAL SECTOR; TRANSPORTATION; HEATING; SAFETY; SOCIO-ECONOMIC FACTORS; ENVIRONMENTAL IMPACT; ELECTRIC POWER; OCEAN THERMAL ENERGY CONVERSION
AVAILABILITY: NTIS

G. S. Dept. of Energy, Division of Transportation Energy Conservation
ADDRESS: Washington, DC 20585
Report No. DOE/CS-40021/1, 78 p.
1977, December
KEYWORDS: ELECTRIC VEHICLES; RESEARCH PROGRAMS; RESEARCH; DEVELOPMENT; HS DDR; GOVERNMENT POLICIES; DEMONSTRATION; IMPLEMENTATION
AVAILABILITY: GPO, Stock No. 061-000-00024-1

G. S. Dept. of Energy, Division of Transportation Energy Conservation
ADDRESS: Washington, DC 20585
TITLE: Program Planning Document: Highway Vehicle Alternative Fuels Utilization Program (HPF)
1978, April
KEYWORDS: ALTERNATE FUELS; HIGHWAY TRANSPORTATION; UTILIZATION; ENERGY CONSUMPTION; SYNTHETIC FUELS; FUNDING; RESEARCH; PLANNING; TECHNOLOGY ASSESSMENT:
<653> CONT. GRAPHES (CHARTS)

<654> U.S. Dept. of Energy, Division of Transportation
Energy Conservation
ADDRESS: Washington, DC
TITLE: Alternative Fuels Utilization Report
Irregular Publication
KEYWORDS: ALTERNATE FUELS; UTILIZATION; US DOE;
INTERNATIONAL ANALYSIS; TRANSPORTATION; PLANNING

<655> U.S. Dept. of Energy, Division of Transportation
Energy Conservation
ADDRESS: Washington, DC
TITLE: Electric and Hybrid Vehicle Demonstration: 1978
1978
KEYWORDS: ELECTRIC VEHICLES; HYBRID
ELECTRIC-POWERED VEHICLES; US DOE; ECONOMY;
DEMONSTRATION; UTILIZATION; ELECTRIC VEHICLE
FUTURE: RESEARCH
AVAILABILITY: GPO, Stock No. 061-000-0071-9

<656> U.S. Dept. of Energy, Division of Transportation
Energy Conservation, Office of Highway Vehicle Systems
ADDRESS: Washington, DC
TITLE: Highway Vehicle Systems Contractors Coordination Meeting
1978, March
KEYWORDS: CONFERENCES; AUTOMOTIVE ENGINES; US
DOE; V-8 TURBO ENGINES; HD ENGINES; USA;
FUEL ECONOMY; PASSENGER TRANSPORTATION; HD
EXCHARGERS; STICKING ENGINES; DESIGN;
ALTERNATE FUELS; TRANSPORTATION; ENERGY
CONSUMPTION; DIAGRAMS; PHOTOGRAPHS; GRAPHS
(CHARTS)
AVAILABILITY: NTIS

<657> U.S. Dept. of Energy, Economic Regulatory Administration
ADDRESS: Washington, DC
TITLE: Notice of Proposed Relicensing and Public Hearing to Establish Contingency Gasoline Panning Plan
1977, April 10
KEYWORDS: GASOLINE; GOVERNMENT POLICIES;
MEASUREMENTS; VEHICLES; ALLOCATIONS; CONSUMERS;
DIETIC POLICIES; PURCHASING; AUTOMOBILES;
ECONOMIC ANALYSIS; REGULATIONS; NATURAL;
PLANNING; SHORTAGES; STATE ANALYSIS; ENERGY
EMERGENCY PLANNING; PUBLIC SERVICES; PRICES

<658> U.S. Dept. of Energy, Economic Regulatory Administration
ADDRESS: Washington, DC
TITLE: Preliminary Findings and Views Concerning the Exemption of Aircraft Fuels from the Mandatory Petroleum Allocation and Price Regulations
1976, January
KEYWORDS: AIR TRANSPORTATION; ENERGY DEMAND;
ENERGY OVERSIGHT; OVERSIGHT; GASOLINE; FUELS;
TABLES (DATA); AVIATION FUELS; TURBINES;
ENERGY; ECONOMIC IMPACT; IMPACT;
DISTRIBUTION; FORCASTING; ALLOCATIONS;
ENERGY UTILIZATION; TRANSPORTATION;
REGULATIONS; PRICES; ECONOMIC; ALLOCATIONS

ADDRESS: Washington, DC
Report No. DOE/EBA-0012, 72 p.
1978, May
KEYWORDS: GASOLINE; PETROLEUM, ALLOCATIONS;
REGULATIONS; EMERGENCY ENERGY PLANNING;
GOVERNMENT POLICIES; ENERGY SHORTAGES; ENERGY
DEMAND; PRICES; ECONOMY; PETROLEUM CONSUMPTION;
MARKET; TANKS (DATA); SALES; FORCASTING;
ENERGY SUPPLIES; PETROLEUM REFINERIES

ADDRESS: Washington, DC
TITLE: Environmental Assessment of the Exemption of Motor Gasoline from the Mandatory Allocation and Price Regulations
38 p.
1978, May
KEYWORDS: ENVIRONMENTAL IMPACT; ALLOCATIONS;
REGULATIONS; GASOLINE; GOVERNMENT POLICIES;
PRICES; VEHICLES; ENERGY POLICIES; REGIONAL
ANALYSIS; WATER QUALITY; AIR QUALITY

<661> U.S. Dept. of Energy, Economic Regulatory Administration, Office of Regulations and Emergency Planning, Major Emergency Programs Division
ADDRESS: Washington, DC
TITLE: Economic and Regulatory Analysis of the Proposed Standby Gasoline Rationing Plan
1976, April 13
KEYWORDS: INDUSTRIAL SECTOR; STATE ANALYSIS;
CONSUMPTION; TABLES (DATA); DEPARTMENT; SALES;
ECONOMIC IMPACT; REGIONAL ANALYSIS; PETROLEUM
CONSUMPTION; GASOLINE; ENERGY SHORTAGES;
PRICES; REGULATIONS; PETROLEUM; ALLOCATIONS;
FORCASTING; ECONOMIC ANALYSIS; GROSS
NATIONAL PRODUCT; EMPLOYMENT; INCOME;
TRANSPORTATION

<662> U.S. Dept. of Energy, Energy Information
ADDRESS: Washington, DC
TITLE: Preliminary Findings and Views Concerning the Exemption of Aircraft Fuels from the Mandatory Petroleum Allocation and Price Regulations
U.S. Dept. of Energy, Energy Information Administration

**Address:** Washington, DC 20545

**Title:** Energy Information Administration Annual Report to Congress: Volume I: Projections of Energy Supply and Demand and Their Impacts (including Executive Summary)


**Keywords:** FORECASTING; ENERGY DEMAND; ENERGY SUPPLIES; IMPORTS; TABLES (DATA); ALT FUELS; GROWTH; GRAPHS (CHARTS); KERSTEN; CONSTRUCTION; REGULATIONS; INTERNATIONAL ANALYSIS; RESIDENTIAL SECTOR; TRANSPORTATION; COMMERCIAL SECTOR; INDUSTRIAL SECTOR; ENERGY CONSUMPTION; ENERGY SOURCES; PETROLIUM; NATURAL GAS; NUCLEAR FUELS; ELECTRIC POWER; UNCONVENTIONAL ENERGY SOURCES; ALTERNATE FUELS; ECONOMIC ANALYSIS; ECONOMIC IMPACT; ENVIRONMENTAL IMPACT

**Availability:** GPO

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U.S. Dept. of Energy, Energy Information Administration

**Address:** Washington, DC 20545

**Title:** Energy Information Administration Annual Report to Congress: Volume II: Statistics and Trends of Energy Supply, Demand, and Prices


**Keywords:** TRANSPORTATION; STATISTICS; TABLES (DATA); IMPORTS; EXPORTS; CONSUMPTION; ENERGY SUPPLIES; NATURAL GAS; PETROLIUM; FOSSIL FUELS; IMPORTS; EXPORTS; ALTERNATE FUELS; GEOHERMAL POWER GENERATION; SOLAR ENERGY; DYE FUELS; RESIDENTIAL SECTOR; PRICES; ELECTRIC POWER; NUCLEAR ENERGY; GRAPHS (CHARTS)

**Availability:** GPO

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U.S. Dept. of Energy, Energy Information Administration, Office of Energy Data and Interpretation

**Address:** Washington, DC 20545

**Title:** Annual Report: Energy Data Reports (formerly Mineral Industry Surveys), 30 p.

**Keywords:** FORECASTING; IMPORTS; EXPORTS; PRODUCTION; REGIONAL ANALYSIS; PETROLIUM PRODUCTS; ENERGY DEMAND; TABLES (DATA)

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U.S. Dept. of Energy, Office of Public Affairs

**Address:** Washington, DC 20545

**Title:** DOT Proposes Emergency Gasoline Rationing Plan

**Department of Energy Information Program Release, D-78-219, 8 p.

**Keywords:** RATIONING: HEARINGS; ENERGY POLICY; GASOLINE: ALLOCATIONS; SALES; MARKETING; VEHICLES; PETROLIUM; GOVERNMENT POLICIES; ALTERNATE FUELS; PUBLIC SERVICE; CONSIDERATIONS; PLANNING; ENERGY POLICY AND CONSERVATION ACT; ENERGY EMERGENCY PLANNING

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U.S. Dept. of Energy, Office of the Under Secretary, Task Force on Alcohol Fuels

**Address:** Washington, DC 20545

**Title:** Alcohol Fuels Program Plan


**Keywords:** ALCOHOL; ETHANOL; METHANOL; LIQUID FUELS; ALTERNATE FUELS; SOCIO-ECONOMIC FACTORS; INDUSTRIAL SECTOR; PRICES; ECONOMIC ANALYSIS; ENERGY RESOURCES; PETROLIUM; ENERGY EMERGENCY PLANNING; COAL; BIOFUELS; SODIUM WASTES; PLANNING; UTILIZATION; RESEARCH; ENVIRONMENTAL IMPACT; TABLES (DATA)

**Availability:** GPO, Stock No. 061-000-00064-0

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U.S. Dept. of Energy, Office of the Under Secretary, Task Force on Alcohol Fuels

**Address:** Washington, DC 20545

**Title:** Department of Energy Position Paper on Alcohol Fuels


**Keywords:** ALCOHOL FUELS; ALTERNATE FUELS; US DOE; ETHANOL; METHANOL; COMMERCIALIZATION; PRODUCTION; FUEL CONSUMPTION; COSTS; UTILIZATION; PLANNING; RESEARCH; GOVERNMENT POLICIES

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U.S. Dept. of Interior, Bureau of Mines

**Address:** Washington, DC


**Annual report, 1550 p. 1977

**Keywords:** MINERALS; STATISTICS; TABLES (DATA)
<670> CONT.
METALS; POISEL FUELS; PRODUCTION; MINING;
EXTRATION; INDUSTRY; COAL; NATURAL GAS;
PETROLEUM PRODUCTS; MINING; STATE ANALYSIS;
REGIONAL ANALYSIS; INTERNATIONAL TRADE
AVAILABILITY: GPO, Stock No. 034-004-01522-1

<671> U.S. Dept. of Interior, Bureau of Mines
ADDRESS: Washington, DC
TITLE: Minerals in the U.S. Economy: Ten-Year
Supply-Demand Profiles for Mineral and Fuel
Commodities (1966-75)
99 p.
1977
KEYWORDS: MINERALS; FUELS; RESOURCES; TABLES
(DATA); SUPPLY (ECONOMICS); DEMAND
ECONOMICS); MINING; ENERGY SUPPLIES;
COMMODITIES; TABLES (DATA); ENERGY SOURCES
AVAILABILITY: GPO

<672> U.S. Dept. of Interior, Bureau of Mines
ADDRESS: Washington, DC
TITLE: Status of the Mineral Industries: 1977
66 p.
1977
KEYWORDS: MINERALS; INDUSTRIES; MINING; METALS;
GRAPH (GRANTS); STEEL; PRODUCTION;
MINING; TRANSPORTATION; ECONOMICS;
PETROLEUM PRODUCTS; IMPORTS; EXPORTS;
INTERNATIONAL TRADE; CONSTRUCTION MATERIALS;
ENERGY RESOURCES; COAL; PETROLEUM; NUCLEAR
FUELS; NATURAL GAS; MINERAL; IRON;
RECLAMATION; PLASTICS

<673> U.S. Dept. of Interior, Bureau of Mines, Division
of Minerals Data
ADDRESS: Washington, DC 20241
TITLE: Mineral Industry Surveys: Petroleum
Affiliations in the United States and Puerto
Rico, January 1, 1977
Annual report, 77 p.
1977, July 15
KEYWORDS: PETROLEUM; PUERTO RICO; PETROLEUM
AFFILIATIONS; PRODUCTION; CAPACITY;
EXTRACTION; REGIONAL ANALYSIS; TABLES
(DATA); CONSTRUCTION; STATE ANALYSIS

<674> U.S. Dept. of Transportation
ADDRESS: Washington, DC
TITLE: U.S. Dept. of Transportation. Fiscal Year
1979 Budget in Brief
18 p.
1978, January
KEYWORDS: BUDGET; GOVERNMENT POLICIES;
TRANSPORTATION; TABLES (DATA); RAIL
TRANSPORTATION; HIGHWAY TRANSPORTATION; AIR
TRANSPORTATION; LEGISLATION; SAFETY; URBAN
TRANSPORTATION; MASS TRANSPORTATION

<675> U.S. Dept. of Transportation
ADDRESS: Washington, DC 20590

<676> TITLE: U.S. Department of Transportation. 1976
Annual Report: Fiscal Year 1976
1976
KEYWORDS: US DOT; TRANSPORTATION; TABLES (DATA);
WATER TRANSPORTATION; AIR TRANSPORTATION;
RAIL TRANSPORTATION; HIGHWAY TRANSPORTATION;
MASS TRANSPORTATION; MATERIALS; SAFETY;
RAILROADS
AVAILABILITY: GPO, Stock No. 500-000-00197-7

<677> U.S. Dept. of Transportation; U.S. Environmental
Protection Agency
ADDRESS: Washington, DC
TITLE: Study of Potential for Motor Vehicle Fuel
Economy Improvement: Fuel Economy Test
Procedures Panel Report
Report No. 6, 75 p.
1975, January 10
KEYWORDS: FUEL ECONOMY; MOTOR VEHICLES; FUEL
CONSUMPTION; TESTING; TABLES (DATA);
AUTOMOBILE TRANSMISSIONS; URBAN
TRANSPORTATION; WEIGHT; SPEED LIMITS;
INTERSTATE TRANSPORTATION; HISTORY;
AUTOMOTIVE EMISSIONS; AUTOMOBILES; WEATHER;
DRIVING CYCLE

<678> U.S. Dept. of Transportation; U.S. Environmental
Protection Agency
ADDRESS: Washington, DC
TITLE: Study of Potential for Motor Vehicle Fuel
Economy Improvement: Safety Implications
Panel Report
1975, January 10
KEYWORDS: FUEL ECONOMY; WEIGHT; SPEED LIMITS;
SAFETY; AUTOMOBILES; TRANSPORTATION;
STATISTICS; TABLES (DATA); URBAN AREAS;
INJURIES; STATE ANALYSIS; HISTORY; SALES;
MANUFACTURERS; RURAL AREAS; AUTOMOTIVE
ENGINES; TRAFFIC CONTROL; ACCIDENTS;
PERFORMANCE; DRIVING CYCLE

<679> U.S. Dept. of Transportation; U.S. Environmental
Protection Agency
ADDRESS: Washington, DC
TITLE: Study of Potential for Motor Vehicle Fuel
Economy Improvement: Air Quality and
Emissions Panel Report
1975, January 10
KEYWORDS: FUEL ECONOMY; FUELS; AUTOMOTIVE
EMISSIONS; AIR QUALITY; DIESEL ENGINES;
TABLES (DATA); TRUCKS; FUEL CONSUMPTION; OILS;
HYDROCARBON; CARBON MONOXIDE; HYDROGEN
OXIDES; AUTOMOBILES; HISTORY; GASOLINE;
MOBILES; TRANSPORTATION

<680> U.S. Dept. of Transportation, Coast Guard
ADDRESS: Washington, DC 20590
TITLE: Boating Statistics: 1977
Eleventh annual report, Report No. 01-357, 41 p.
1976, May 1
KEYWORDS: BOATS; SAFETY; ACCIDENTS; STATE
ANALYSIS; TABLES (DATA)
<689> CONT.
450 p.
1977, April
KEYWORDS: COMPUTER PROGRAMS; URBAN TRANSPORTATION; PLANNING; INFORMATION; LAND USE; VEHICLE TRIPS; TRAFFIC SIMULATION; TRAVEL; AIR QUALITY; BIBLIOGRAPHIES
AVAILABILITY: GPO, Stock No. 050-001-00125-0

<690>
U.S. Dept. of Transportation, Federal Highway Administration
ADDRESS: Washington, DC
TITLE: Nationwide Personal Transportation Study: Transportation Characteristics of School Children
Report No. 8, 32 p.
1975, July
KEYWORDS: TRANSPORTATION; TRAVEL TIME; MILEAGE; SCHOOLS; CHILDREN; BUSES (VEHICLES); ELECTRICITY; PUBLIC TRANSPORTATION; BICYCLES; PASSENGER TRANSPORTATION; STATISTICS; TABLES (DATA); VEHICLE MILES TRAVELED; DISTANCE; AGE GROUPS

<691>
U.S. Dept. of Transportation, Federal Highway Administration
ADDRESS: Washington, DC
TITLE: Nationwide Personal Transportation Study: Use of Transportation and Personal Characteristics of Tripakers
Report No. 9, 49 p.
1976, November
KEYWORDS: TRAVEL; TRIP LENGTH; MOTOR VEHICLES; TRANSPORTATION MODAL CHOICE; PASSENGER TRANSPORTATION; AGE GROUPS; SURVEYS; CENSUS; TRAVEL TIME; EDUCATION; VEHICLE MILES TRAVELED; DISTANCE; TRIP PURPOSES: TABLES (DATA)
AVAILABILITY: GPO

<692>
U.S. Dept. of Transportation, Federal Highway Administration
ADDRESS: Washington, DC
TITLE: Highway Statistics: 1976
1977, March
KEYWORDS: HIGHWAY TRANSPORTATION; VEHICLES: LEGENDS; AUTOMOTIVE FUELS: FUEL CONSUMPTION DATABASES; STATE GOVERNMENT; VEHICLE REGISTRATION DATABASES; REVENUE: RATES (COSTS); TRAVEL: VELOCITY; VEHICLE MILES TRAVELED: DISTANCE; TRAFFIC VOLUMES: TABLES (DATA); HIGHWAY VOLUMES: TABLES (DATA); OWNERSHIP: TYPING: LOCAL GOVERNMENT
AVAILABILITY: GPO

<693>
U.S. Dept. of Transportation, Federal Railroad Administration
ADDRESS: Washington, DC
TITLE: Rail Passenger Statistics in the Northeast Corridor: 1974-75
61 p.
1976, March
KEYWORDS: RAIL TRANSPORTATION; PASSENGER TRANSPORTATION; NORTHEASTERN STATES; CAPACITY; STATISTICS

<694>
U.S. Dept. of Transportation, Federal Railroad Administration, Government Industry Task Force on Railroad Electrification
ADDRESS: Washington, DC 20590
TITLE: A Series of Factors Influencing Railroad Electrification
V-1
1978
KEYWORDS: RAIL TRANSPORTATION; RAILROADS; ELECTRIC VEHICLES; CAPITAL; EUROPE; JAPAN; RAILROADS: RISKS; GOVERNMENT POLICIES; ELECTRIC POWER; ELECTRIC RAIL SYSTEMS

<695>
U.S. Dept. of Transportation, National Highway Traffic Safety Administration
ADDRESS: Washington, DC 20590
TITLE: Automotive Fuel Economy Program: Second Annual Report to the Congress
1978, January
KEYWORDS: AUTOMOTIVE FUELS; FUEL ECONOMY; REGULATIONS; PASSenger TRANSPORTATION; NATIONAL ENERGY PLAN; MANUFACTURERS; ENERGY CONSUMPTION; PETROLEUM; STANDARDS; RESEARCH PROGRAMS; VEHICLE MILES TRAVELED; MILEAGE; GOVERNMENT POLICIES; GASOLINE

<696>
U.S. Dept. of Transportation, National Highway Traffic Safety Administration
ADDRESS: Washington, DC 20590
TITLE: Applicability of Federal Motor Vehicle Standards to Electric and Hybrid Vehicles
1978, January
KEYWORDS: MOTOR VEHICLES; SAFETY; STANDARDS; PERFORMANCE; ELECTRIC VEHICLES; PASSENGER TRANSPORTATION; TESTING; ACCELERATION; HYBRID ELECTRIC-Powered VEHICLES; BUSES (VEHICLES): TRUCKS: COSTS

<697>
U.S. Dept. of Transportation, National Highway Traffic Safety Administration, Office of Passenger Vehicle Research, Technology Assessment Division
ADDRESS: Washington, DC 20590
TITLE: Automotive Fuel Economy Contractors' Coordination Meeting: Summary Report
1978
KEYWORDS: FUEL ECONOMY; FUEL CONSUMPTION; RESEARCH: STANDARDS; TRANSPORTATION; EFFICIENT; RESEARCH PROGRAMS; DATA COLLECTION; STATISTICS; TECHNOLOGY; ENGINEERING; MANUFACTURING; MARKETING; GOVERNMENT POLICIES; DIESEL ENGINE; SPARK IGNITION ENGINES; AUTOMOTIVE TRANSMISSIONS; COMPONENTS; MAINTENANCE; VEHICLES: TESTING;
<097> COST.
LUBRICANTS: DEMAND (ECONOMICS); ECONOMIC MODELS; FORECASTING; TABLES (DATA); GRAPHS (CHARTS); PHOTOGRAPHS; WEIGHT; COSTS; AUTOMOTIVE INDUSTRY; MAINTENANCE; ENVIRONMENTAL PROTECTION AGENCY.

<098> U.S. Dept. of Transportation, National Highway Traffic Safety Administration, Technical Assistance Division
ADDRESS: Washington, DC 20590
TITLE: Fuel Economy ... A Subject Bibliography from Highway Safety Literature
KEYWORDS: BIBLIOGRAPHIES; HIGHWAY TRANSPORTATION; ECONOMICS; ECONOMIC CONSIDERATION; PERFORMANCE; PASSENGER TRANSPORTATION; TRUCKS; CARAVAN; MANUFACTURER; MOTIVE DOMINANCE; GOVERNMENT POLICIES; REGULATIONS; AUTOMOBILES; ENGINES; SAFETY; AVAILABILITY; ETFS.

<099> U.S. Dept. of Transportation, Office of the Secretary
ADDRESS: Washington, DC
TITLE: The Status of the Nation's Highways: Conditions and Performance, Report of the Secretary of Transportation to the United States Congress, Permanent to Section 3, Public Law 69-160
Congressional Committee Print No. 95-29, 483 p. 1977, September.
SPONSOR: U.S. House of Representatives, Committee on Transportation and Infrastructure.
KEYWORDS: HIGHWAYS; TRAVEL; PERFORMANCE; INVESTMENTS; REGIONAL ANALYSIS; FORECASTING; TABLES (DATA); GRAPHS (CHARTS).

<100> U.S. Dept. of Transportation, Office of the Secretary
ADDRESS: Washington, DC
TITLE: 1975 National Transportation Study. Manual 1: General Information
KEYWORDS: TRANSPORTATION; STATE ANALYSIS; SOUVETS; PLANNING; ORGANIZATIONS; STATE GOVERNMENTS; AIRPORTS; HIGHWAYS; TRANSPORTATION SYSTEMS; GOVERNMENT POLICIES; EFFICIENCY; SAFETY; ENVIRONMENTAL IMPACT; TABLES (DATA).

<101> U.S. Dept. of Transportation, Office of Transportation Planning Analysis
ADDRESS: Washington, DC
TITLE: Catalog of Tabulations: 1974 National Transportation Study
KEYWORDS: TRANSPORTATION; STATE ANALYSIS; TABLES (DATA); URBAN TRANSPORTATION; CAPITAL COSTS; GOODS (CONSUMER GOODS); BUSES (VEHICLES); AIRPORTS; RAIL TRANSPORTATION; CONSUMERS; VEHICLE MILES TRAVELED.

<102> U.S. Dept. of Transportation, Transportation Systems Center, Technology Sharing Program Office
ADDRESS: Kendall Square, Cambridge, MA 02142
TITLE: Rural Passenger Transportation: State-of-the-art Overview
W.P. 1977, December
KEYWORDS: ECONOMICS; RURAL TRANSPORTATION; FREIGHT TRANSPORTATION; VIOLENT; RURAL AREAS; POPULATION (STATISTICS); GOVERNMENT; TABLES (DATA); SOCIO-ECONOMIC FACTORS; REGIONAL ANALYSIS; PUBLIC TRANSPORTATION; AUTOMOBILES; MOBILITY; TRANSPORTATION SYSTEMS; TRANSPORTATION DISADVANTAGED; STATE ANALYSIS.

<103> U.S. Dept. of Transportation, Transportation Systems Center, Technology Sharing Program Office
ADDRESS: Kendall Square, Cambridge, MA 02142
TITLE: Light Rail Transit: State-of-the-art Overview
SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of R & D Policy; U.S. Dept. of Transportation, Urban Mass Transportation Administration.
KEYWORDS: LIGHT RAIL TRANSIT; PASSENGER TRANSPORTATION; URBAN TRANSPORTATION; COMPARATIVE VALUATIONS; REGIONAL ANALYSIS; CANADA; RIGHT-OF-WAY; TABLES (DATA); MAPS.

<104> U.S. Dept. of Transportation, Transportation Systems Center, Technology Sharing Program Office
ADDRESS: Kendall Square, Cambridge, MA 02142
TITLE: Rural Passenger Transportation Primer
Selected Transportation Topics, 70 p. 1977, January.
SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of R & D Policy.
KEYWORDS: RURAL TRANSPORTATION; REGIONAL ANALYSIS; POVERTY; RURAL AREAS; SOUTH CAROLINA; PASSENGER TRANSPORTATION; PHASE 1; PHASE 2; GOVERNMENT POLICIES; AFFORDABILITY; ECONOMICS; BIBLIOGRAPHIES; STATE ANALYSIS; TRANSPORTATION DISADVANTAGED.

<105> U.S. Dept. of Transportation, Transportation Systems Center, Technology Sharing Program Office
ADDRESS: Kendall Square, Cambridge, MA 02142
TITLE: Mini-bus Profile
Selected Transportation Topics, 81 p. 1977, January.
SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of R & D Policy.
KEYWORDS: BUSES (VEHICLES); PASSENGER TRANSPORTATION; ENGINES; TABLES (DATA); DESIGN; ELECTRIC VEHICLES; DIRECTORS; MANUFACTURERS; FUEL CONSUMPTION; PERFORMANCE.
<706>

U.S. Dept. of Transportation, Transportation Information Division

ADDRESS: Kendall Square, Cambridge, MA 02142


1976, March

SPONSORS: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Policy, Plans, and International Affairs

KEYWORDS: TRANSPORTATION; SAFETY; ACCIDENTS; TRAFFIC; GRAFHS (CHARTS); TABLES (DATA)

AVAILABILITY: NTS

1977, July

SPONSORS: U.S. Dept. of Transportation, Transportation Systems Center, Transportation Information Division

ADDRESS: Kendall Square, Cambridge, MA 02142


1975, June

SPONSORS: U.S. Dept. of Transportation, Federal Aviation Administration, Office of Aviation Management, Office of Information Services

KEYWORDS: AIR TRANSPORTATION; AIRCRAFT; TRAFFIC; SCHEDULED AIR TRANSPORTATION; AIRPORTS; TABLES (DATA); GRAPHS (CHARTS); PASSENGER SERVICES

AVAILABILITY: NTS

<707>

U.S. Dept. of Transportation, Urban Mass Transportation Administration

ADDRESS: Washington, DC 20590


131 p.

KEYWORDS: URBAN TRANSPORTATION; MASS TRANSPORTATION; LEGISLATION; GOVERNMENT POLICIES; REGULATIONS

AVAILABILITY: GPO, Stock No. 050-014-00007-0/ Catalog No. TO 7.5:311.3

<708>

U.S. Dept. of Transportation, Urban Mass Transportation Administration, Office of Technology Development and Deployment, Office of AIR

APPLICATIONS; U.S. Dept. of Transportation, Transportation Systems Center, Technology Shaping Program Office

ADDRESS: DOT/UMTA, Transport Point Building, 2100 2nd Street SW, Washington, DC 20590; DOT/UMTA, Kendall Square, Cambridge, MA 02142

TITLE: People Mover Profiles

10 p.

1977, May

KEYWORDS: PASSENGER TRANSPORTATION; URBAN AREAS; TECHNOLOGY; DEMONSTRATION; PERFORMANCE; AUTOMATED GUIDED WAY

AVAILABILITY: GPO

<709>

U.S. Dept. of Transportation, Urban Mass Transportation Administration, Policy and Program Development, Office of Program Evaluation

ADDRESS: Washington, DC 20590

TITLE: The NTA Rail Modernization Program. The Distribution of Capital Grant Funds for Rail Rehabilitation and Modernization, 1965-1977

1978, July

KEYWORDS: RAIL TRANSPORTATION; CAPITAL COSTS; ENERGY CONSUMPTION; RAPID TRANSIT SYSTEMS; GROWTH; GOVERNMENT POLICIES; REGIONAL ANALYSIS; US DOT; MAINTENANCE; ENTREPRENEURING; MODERNIZATION; OPERATING COSTS; EMPLOYMENT; PASSENGERS; TRANSPORTATION; COMMODITY; TABLES (DATA); RAILROADS; FUNDING

AVAILABILITY: NTS

<710>

U.S. Environmental Protection Agency, Emission Control Technology Division, Standards Development and Support Branch

ADDRESS: Ann Arbor, MI 48105


Report No. PB-270721, NC 75-05, 13 p.

1975, August

KEYWORDS: MOTORCYCLES; DYNAMOMETERS; EMISSIONS; FUEL CONSUMPTION; TABLES (DATA); FUEL ECONOMY TESTING; ROBOT OF INERTIA; HEIGHT

AVAILABILITY: NTS

<711>

U.S. Environmental Protection Agency, Emission Control Technology Division, Standards Development and Support Branch

ADDRESS: Ann Arbor, MI 48105

TITLE: Motorcycle Usage. Technical Support Report for Regulatory Action


1976, January

KEYWORDS: USES; UTILIZATION; MOTORCYCLES; SIZE; TRANSPORTATION; EMISSIONS; CORROSION; VEHICLE TRIPS; VELOCITY; TABLES (DATA)

INFORMATION NEEDS

AVAILABILITY: NTS

<712>

U.S. Environmental Protection Agency, Office of Transportation and Land Use Policy

ADDRESS: Washington, DC 20590

TITLE: Bicycle Strategies to Reduce Air Pollution


1976, June

KEYWORDS: BICYCLES; AIR POLLUTION; ENVIRONMENTAL PROTECTION AGENCY; COMMUNITY DEVELOPMENT; EDUCATION; PLANNING; ROADS

<713>

U.S. House of Representatives, Committee on Government Operations

ADDRESS: Washington, DC 20510

TITLE: Department of Energy Organization Act

Congressional Committee Print, 95th Congress, 1st Session, Hearings on H.R. 4263, held March 28, 29, April 5, 6, 18, and 19, 1977, 940 p.

1977
<715> CONT.
KEYWORDS: US DOE; HEARINGS; ENERGY POLICY; GOVERNMENT POLICIES

<715> U.S. International Trade Commission
ADDRESS: Washington, DC 20435
TITLE: Automotive Trade Statistics, 1964-76
Series B, DTIC Publication No. 639, 103 p., 1977, October
KEYWORDS: TRADE STATISTICS; TABLES (DATA); INTERNATIONAL TRADE; TRENDS; SALES; EXPORTS; CONSUMPTION; PRICES; VEHICLE REGISTRATIONS

<716> U.S. Senate, Committee on Energy and Natural Resources
ADDRESS: Washington, DC
TITLE: Economic Impact of President Carter's Energy Program
Congressional Committee Print, 95th Congress, 1st Session, Publication No. 95-33, hearings held May 3, 1977, 140 p.
KEYWORDS: ECONOMIC IMPACT; ENERGY POLICY; NATIONAL ENERGY PLAN; TARIFFS; GASOLINE; FUEL ECONOMY; TRANSPORTATION; HEAT BLENDING; ENERGY CONSUMPTION; INDUSTRIAL SECTOR; UTILITIES: PRICES; PETROLEUM; NATURAL GAS; COAL: RESEARCH; NUCLEAR ENERGY; NUCLEAR REACTORS

<717> U.S. Senate, Committee on Energy and Natural Resources: Federal Energy Administration
ADDRESS: Washington, DC
TITLE: Regulation of Domestic Crude Oil Prices
Publication No. 95-8, 95th Congress, 1st Session, March, 1977
KEYWORDS: REGULATION; REGULATIONS; PRICES; ECONOMIC IMPACT; SUPPLY (ECONOMICS); PRODUCTION; TABLES (DATA); GRAPHS (CHARTS); IMPLEMENTATION; GOVERNMENT POLICIES
AVAILABILITY: U.S. Senate Committee on Energy and Natural Resources

<718> U.S. Senate, Committee on Energy and Natural Resources, Subcommittee on Energy Conservation and Regulation
ADDRESS: Washington, DC
TITLE: Advisory Energy Conservation Assessments to President Carter's Energy Program
Congressional Committee Print, 95th Congress, 1st Session, Serial No. 95-103, hearings held July 25, 26 and August 1, 1977, 789 p.
KEYWORDS: AUTOMOBILES; NATIONAL ENERGY PLAN; ENERGY CONSERVATION; TRANSPORTATION; GOVERNMENT POLICIES; EFFICIENCY; STANDARDS; RESIDENTIAL SECTOR; SPACE HEATING; ELECTRIC CLIMATE CONTROL; FURNACES; ENERGY CONSUMPTION; ENERGIES; FUEL ECONOMY; TEMPERATURE; TABLES (DATA)

<719> U.S. Senate, Committee on Energy and Natural Resources, Subcommittee on Energy Conservation and Regulation
ADDRESS: Washington, DC
TITLE: Status of Federal Energy Conservation Programs. Parts 1 and 2
Congressional Committee Print, 95th Congress, 1st Session, Serial No. 95-41, 282 p. For Part 1, 1977, hearings held April 4 and 6, 1977
KEYWORDS: ENERGY CONSERVATION; GOVERNMENT POLICIES; ENERGY SHORTAGES; IMPACTS; TECHNOLOGY; ENERGY RESOURCES; ENERGY CONSUMPTION; INDUSTRIAL SECTOR; TRANSPORTATION; SOLAR ENERGY; PRICES; INCOME; ENERGY SUPPLIES; RESIDENTIAL SECTOR; REFORMATTING; BUILDINGS; APPLIANCES; GRAPHS (CHARTS); COSTS; COOPERATION; ELECTRICITY; FUEL CONSUMPTION; INDUSTRY; CONSUMERS; MANUFACTURERS; DISTRIBUTION

<720> U.S. Senate, Committee on Governmental Affairs
ADDRESS: Washington, DC
TITLE: Department of Energy Organization Act
Congressional Committee Print, Report No. 95-164 to accompany S.826, 95th Congress, 1st Session, 125 p.
KEYWORDS: US DOE; LEGISLATION; ENERGY POLICIES; GOVERNMENT POLICIES; DOE; NRC; FEDERAL POWER COMMISSION; ENERGY CONSERVATION; REGULATIONS
AVAILABILITY: GPO

<721> U.S. Senate, Committee on Governmental Affairs
ADDRESS: Washington, DC
TITLE: Department of Energy Organization Act
Congressional Committee Print, Report No. 95-164 to accompany S.826, 95th Congress, 1st Session, 125 p.
KEYWORDS: US DOE; LEGISLATION; ENERGY POLICIES; GOVERNMENT POLICIES; DOE; NRC; FEDERAL POWER COMMISSION; ENERGY CONSERVATION; REGULATIONS
AVAILABILITY: GPO

<722> U.S. Senate, Committee on Governmental Affairs
ADDRESS: Washington, DC
TITLE: Department of Energy Organization Act
Congressional Committee Print, 95th Congress, 1st Session, hearings on S.826 and S.591, held March 7, 9, 10, 11, 16, 17, 18, 22, 24, 25, 29, 31 and April 4, 1977, 1322 p.
KEYWORDS: US DOE; ENERGY POLICY; LEGISLATION; GOVERNMENT POLICIES; HEARINGS
AVAILABILITY: GPO

<723> U.S. Senate, Committee on Governmental Affairs
ADDRESS: Washington, DC
TITLE: Department of Energy Organization Act
Congressional Committee Print, 95th Congress, 1st Session, hearings on S.826 and S.591, held March 7, 9, 10, 11, 16, 17, 18, 22, 24, 25, 29, 31 and April 4, 1977, 1322 p.
KEYWORDS: US DOE; ENERGY POLICY; LEGISLATION; GOVERNMENT POLICIES; HEARINGS
AVAILABILITY: GPO

<724> U.S. Travel Data Center
Urban Connection for Technology Initiatives, Transportation Task Force: Public Technology Inc.
ADDRESS: P.O. Box 1140, Washington, DC 20036
TITLE: Urban Goods Movement
1976, February
SPONSOR: U.S. Dept. of Transportation
KEYWORDS: COMMUTATION; CARS; TRANSPORTATION; TRUCKS; RAILROADS; LOCAL GOVERNMENT; URBAN AREAS; TRAFFIC; INSTITUTIONAL FACTORS;
AVAILABILITY: NTIS

Urban Connection for Technology Initiatives, Transportation Task Force: Public Technology Inc.
ADDRESS: P.O. Box 1140, Washington, DC 20036
TITLE: Alternative Work Schedules
1976, February
SPONSOR: U.S. Dept. of Transportation
KEYWORDS: SCHEDULING; COMPUTING; WORK; WORKING CONDITIONS; RESEARCH; DEMONSTRATION; DIRECTORIES; TRAFFIC; TRANSPORTATION
AVAILABILITY: NTIS

Urban Connection for Technology Initiatives, Transportation Task Force: Public Technology Inc.
ADDRESS: P.O. Box 1140, Washington, DC 20036
TITLE: Asphalt Improvements
1976, October
SPONSOR: U.S. Dept. of Transportation
KEYWORDS: CONSTRUCTION; ASPHALT; CONCRETE; RECYCLING; ADDITIVES

Urban Transportation Systems Associates Inc.
1977, April
SPONSOR: Rhode Island Dept. of Transportation, Planning Division; R.I. Dept. of Transportation; Federal Highway Administration
KEYWORDS: TRAFFIC COUNTS; VEHICLE SPEEDS; TRAVEL VELOCITIES; AUTOMOBILES OCCUPIED; SEASONAL VARIATIONS; WEATHER; SEASONS; TRAFFIC COUNTS; TRANSPORTATION INSTITUTIONS; COMPUTER PROGRAMS
AVAILABILITY: Rhode Island Dept. of Transportation, Planning Division, State Office Building, Providence, RI 02903

Vailar, L.R.; Broeman, A.W.
Society of Automotive Engineers Laboratories
ADDRESS: Columbus, OH
TITLE: Mathematical Model for the Design of Grids for Electric Vehicle Batteries
1978
KEYWORDS: ELECTRIC VEHICLES; LEAD-ACID BATTERIES; MODELS; PERFORMANCE; DESIGN; TABLES; DATA
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15094 $2.50

Van Aken, J.C.
ADDRESS: Long Beach, CA 90846
TITLE: Cost/Benefit Tradeoffs for Reducing the Energy Consumption of the Commercial Air Transportation System. Volume II: Market and Economic Analysis
1976, June
SPONSOR: National Aeronautics and Space Administration, Ames Research Center
KEYWORDS: BENEFIT COST ANALYSIS; ENERGY CONSUMPTION; ENERGY CONSERVATION; AIR TRANSPORTATION; PASSENGER TRANSPORTATION; ECONOMIC ANALYSIS; OPERATING COSTS; MARKET TABLES; DATA; GRAPHS (CHARTS); DESIGN; PROFITS; CONSUMPTION; COMPARATIVE EVALUATIONS; PROFITS
AVAILABILITY: NTIS

Van Kessel, R., B.; Bahn, P.
R.V. Kessel, gigi-Gossenfabrikken
ADDRESS: Germany
TITLE: Design of the 8-215 D.I. Automotive Stirling Engine
1977
SPONSOR: Society of Automotive Engineers
KEYWORDS: STIRLING ENGINE; CAD; THERMOELECTRIC; THERMOELECTRIC; HEAT; ECONOMY; DESIGN; DIAGRAMS; GRAPHS (CHARTS); PROTOTYPES
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15094

Van Jones, P.D.
U.S. Dept. of Transportation, Office of Systems Analysis and Information, Strategic Planning Division
ADDRESS: Washington, DC 20590
TITLE: The Role of Travel Time Limits in Urban Growth (A Postulated Urban Area Definition)
41 p.
1978, April
<739> <740> 

Voehins, (Alan N.) and Associates Inc.  
ADDRESS: 7738 Old Spriglhousn Rd., Westgate Research Park, Bethesda, MD 20814  
TITLE: Study of Future Paratransit Requirements  
1977, January  
SPONSOR: U.S. Dept. of Transportation, Urban Mass  
Transportation Administration  
KEYWORDS: FORECASTING; PARATRANSIT: URBAN AREAS;  
LEGAL ASPECTS; ENERGY CONSUMPTION; COSTS;  
AUTOMOBILES; VEHICLES; MASS TRANSPORTATION;  
COMPUTERS; VAPORS; COMPARATIVE EVALUATIONS;  
TABLES (DATA)  
AVAILABILITY: NTIS

<741> <742> 

Voehins, (Alan N.) and Associates Inc.  
ADDRESS: Bethesda, MD 20814  
TITLE: Factors and Trends in Trip Length  
National Cooperative Highway Research Program  
1968  
SPONSOR: American Association of State Highway  
Official; U.S. Bureau of Public Roads;  
National Academy of Sciences, National  
Research Council Board  
KEYWORDS: VEHICLE TRIPS; TRAFFIC; URBAN AREAS;  
LAND USE; URBAN TRANSPORTATION;  
TRAVEL BEHAVIOR; SIMULATION MODELS; SOCIO-ECONOMIC  
FACTORS: FORECASTING; MEASUREMENT;  
TRANSPORTATION RESEARCH (CHARTS);  
TABLES (DATA); TRIPS; COMMUTING; SHOPPING  
TRIPS; RECREATION; COMPUTERIZED SIMULATION;  
REGION; TRAVEL (CHARTS);  
PHYSICAL MEASUREMENTS: AUTOMOBILES; COMPARATIVE  
EVALUATIONS: CHICAGO  
AVAILABILITY: NTIS
Waldenburg, J.J.
U.S. Dept. of Commerce, Bureau of Economic Analysis
ADDRESS: Washington, DC 20230
TITLE: Revised Input-Output Tables for the United States: 1967
Report No. PB-270259, BIA-SP 77-029, 68 p.
1977, June
KEYWORDS: INPUT-OUTPUT ANALYSIS; INDUSTRIES; DEMAND (ECONOMIC); SUPPLY (ECONOMIC); PRODUCTION; SALES; PRICES; INVENTORIES; COSTS; CONSUMERS; STATISTICS; TABLES (DATA); INDUSTRIAL SECTOR; COMMERCIAL SECTOR; RESIDENTIAL SECTOR; IMPORTS; TRANSPORTATION
AVAILABILITY: NIES

Walker, N.L.; Board, J.H.; Pigott, J.S.; Sutton, E.W.
Champion Spark Plug Co.
TITLE: How Passenger Car Maintenance Affects Fuel Economy and Emissions
1978
KEYWORDS: FUEL ECONOMY; MAINTENANCE; AUTOMOTIVE REPAIRS; AUTOMOBILES; DESIGN; AUTOMOBILES DRIVERS; TESTING; FUEL CONSUMPTION; AUTOMOTIVE ENGINES; RELEASE; GRAPHS (CHARTS)
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096 $2.50

Walt, A.
Scribner
ADDRESS: Box 5456, Santa Barbara, CA 93108
TITLE: Contributions to the Theory of the Electric Vehicle
1979, December
KEYWORDS: ELECTRIC VEHICLES; MATHEMATICS; PHYSICS; MECHANICS
AVAILABILITY: NIES

Ward's Communications Inc
ADDRESS: 28 West Adams, Detroit, MI 48226
TITLE: Ward's Automotive Yearbook: 1978
1978
KEYWORDS: AUTOMOTIVE; INDUSTRY; INTERNATIONAL TRADE; RECREATION VEHICLES; DIRECTORIES; VEHICLES; MATERIALS; PRODUCTION; SALES; TOWERS; CANADA; AUTOMOBILES; MANUFACTURERS; TRUCKS; CONSTRUCTION; EQUIPMENT; AGRICULTURAL EQUIPMENT; INFORMATION; VEHICLE REGISTRATIONS
AVAILABILITY: $35.00

Weiner, P.
Ogle (David) Ltd.
ADDRESS: United Kingdom
TITLE: A Purpose-Built Electric Taxi

SPONSOR: Society of Automotive Engineers
KEYWORDS: ELECTRIC VEHICLES; TAXICABS; DESIGN
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096 $2.75

Watts, K.W.
Argonne National Laboratory, Energy and Environmental Systems Division
ADDRESS: 9700 South Cass Avenue, Argonne, IL 60439
TITLE: Social Organization and Transportation Energy: An Annotated Bibliography
1978, July
SPONSOR: Energy Research and Development Administration
KEYWORDS: BIBLIOGRAPHIES; ENERGY CONSUMPTION; AUTOMOBILES; BASE TRANSPORTATION; RAIL TRANSPORTATION; BENEFIT COST ANALYSIS; DECISION MAKING; LAND USE; TRANSPORTATION SYSTEMS; PLANNING; FUEL CONSUMPTION; LOCAL GOVERNMENT
AVAILABILITY: NIES

Webster, W.H. (ed.)
U.S. Dept. of Energy, Assistant Secretary for Energy Technology, Division of Energy Storage Systems
ADDRESS: Washington, DC
TITLE: Storage and Electrochemical Systems Program Summary: FY 1977
1978, April
KEYWORDS: ENERGY STORAGE; BATTERIES; FUELING; RESEARCH PROGRAMS; UTILIZATION; ELECTROCHEMICAL CELLS

Welzel, W.
Scribner
ADDRESS: Box 5456, Santa Barbara, CA 93108
TITLE: Driving Cycles for Electric Urban Vehicles and Methods for Obtaining Them
1979, December
KEYWORDS: ELECTRIC VEHICLES; SIMULATION; TABLES (DATA); URBAN TRANSPORTATION; TESTING
AVAILABILITY: NIES

Welzler, G.A.
TITLE: Materials are the Key in Auto Weight Watching
Iron Age, 218(19), 33-39
1976, November 8
KEYWORDS: AUTOMOTIVE INDUSTRY; MATERIALS; WEIGHT; PLASTICS; AUTOMOTIVE ENGINEERING; PERFORMANCE; STEEL; FUEL ECONOMY; CORROSION; PROGRESS; MANUFACTURING; ALUMINUM
Weiner, M.
U.S. Dept. of Transportation, Office of the
Secretary, Office of Assistant Secretary for
Policy, Plans and International Affairs, Office of Transportation Planning Analysis, Urban Analysis Program
ADDRESS: Washington, DC
TITLE: Urban Area Results of the 1978 National Transportation Study
9 P.
1975, January
KEYWORDS: TRANSPORTATION SYSTEMS; SURVEYS; URBAN AREAS; PLANNING; CAPITAL COSTS; HIGHWAYS;
PUBLIC TRANSPORTATION; REVENUE; URBAN TRANSPORTATION; OPERATING COSTS

Weiner, M.; Poole, B.
U.S. Dept. of Transportation, Assistant Secretary of Transportation Planning Analysis, Evaluation and Planning Analysis Division, Urban Analysis Program
ADDRESS: Washington, DC
TITLE: Some Urban Area Journey to Work Statistics
1978, May 5
KEYWORDS: URBAN AREAS; COMMUTING; VEHICLE TRIPS; TRANSPORTATION; TRIPS (DATA); PASSENGER TRANSPORTATION; POPULATION (STATISTICS); REGIONAL ANALYSIS; STATE ANALYSIS

Wheeler, P.K.
U.S. Congress, Congressional Budget Office, Natural Resources and Commerce Division
ADDRESS: Washington, DC
TITLE: Rail Link Reorganization: Congressional Action and Federal Expenditures Related to the Final System Plan of the U.S. Railway Association
Background Paper No. 2, 50 p.
1976, January 15
KEYWORDS: RAIL TRANSPORTATION; GOVERNMENT POLICIES; EXPENDITURES; BUDGETS; PLANNING; FUNDING; ECONOMICS; LEGISLATION
AVAILABILITY: 990 $1.60

Witte, E.R.
Enaco Enterprises Inc.
TITLE: A Digital Computer Program for Simulating Electric Vehicle Performance
1978
KEYWORDS: ELECTRIC VEHICLES; COMPUTERIZED SIMULATION; COMPUTER PROGRAMS; MODELS; DESIGN; AUTOMOTIVE CONTROL SYSTEMS; PERFORMANCE; BATTERIES; DRIVING CYCLE; GRAPHS (CHARTS)
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrensdale, PA 15096 $2.50

White, S.B. : Clayton, C.A.; Bresmer, L.D.; Stewart, J.R.
Research Triangle Institute; North Carolina, University of, Highway Safety Research Center
ADDRESS: NIT, P.O. Box 12194, Research Triangle Park, NC 27709
TITLE: Improved Exposure Measurements
1975, September 30
SPONSOR: U.S. Dept. of Transportation, National Highway Traffic Safety Administration
KEYWORDS: VEHICLE MILES TRAVELED; ACCIDENTS; SAFETY; AUTOMOBILE DRIVERS; RIDERS; HIGHWAYS; NORTH CAROLINA; URBAN AREAS; RURAL AREAS; TABLES (DATA); POPULATION (STATISTICS); ACR GROUPS; OWNERSHIP; VEHICLE REGISTRATIONS; QUESTIONNAIRES; SET; STATE ANALYSIS

Williams, E.L.
National Academy of Sciences, National Research Council, Transportation Research Board
ADDRESS: 2101 Constitution Ave. NW, Washington, DC 20418
TITLE: Transportation and Land Development Policy
Transportation Research Record 565, 10 papers prepared for the 5th Annual Meeting of the Transportation Research Board, 75 p.
1976
KEYWORDS: TRANSPORTATION SYSTEMS; LAND USE; LAND DEVELOPMENT; GOVERNMENT POLICIES; PLANNING; SOCIO-ECONOMIC FACTORS; ENVIRONMENTAL IMPACT; HIGHWAYS; URBAN AREAS; SUBURBAN AREAS
AVAILABILITY: $6.00

Williams, E.L., Jr.
Princeton University, Transportation Program
ADDRESS: Princeton, N.J. 08540
TITLE: Energy Costs of Heavy Rail Transit Construction
1976, June
KEYWORDS: RAIL AREA RAPID TRANSIT SYSTEM; CONSTRUCTION; INPUT-OUTPUT ANALYSIS; SYSTEMS ANALYSIS; ENERGY CONSUMPTION; COSTS; TABLES (DATA)

Williams, E.B.
Shell International Petroleum Co. Ltd.
ADDRESS: United Kingdom
TITLE: Energy Analysis and the Electric Car
1976
SPONSOR: Society of Automotive Engineers
KEYWORDS: TABLES (DATA); ELECTRIC VEHICLES; BATTERIES; FUEL CELLS; GASOLINE; ENGINES; ENERGY CONSUMPTION; CONSTRUCTION; COMPARATIVE EVALUATIONS; INTERNAL COMBUSTION ENGINES
AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096

Williams, L.J.
National Aeronautics and Space Administration, Ames Research Center
ADDRESS: Moffett Field, CA 94035
TITLE: Air Transportation Energy Efficiency
SPOONER: Energy Research and Development Administration
KEYWORDS: AIR TRANSPORTATION; EFFICIENCY; ENERGY CONSUMPTION; NUCLEAR: AIRCRAFT; GRAPHS (CHARTS); FUEL CONSUMPTION

Wilson, C.L.
Massachusetts Institute of Technology, Workshop on Alternative Energy Strategies (NASS)
ADDRESS: Cambridge, MA 02139
SPOONER: National Science Foundation
KEYWORDS: ENERGY SUPPLIES; ENERGY DEMAND; ENERGY CONSUMPTION; FORECASTING; GROWTH: PRICES; FUELS; ENERGY CONSERVATION; PETROLEUM; RESERVES: OPEC; INTERNATIONAL TRADE; NATURAL GAS; PRODUCTION: COAL; NUCLEAR ENERGY; FOSSIL FUELS; UNCONVENTIONAL ENERGY SOURCES; TABLES (DATA) ; RECOVERY; DEVELOPING COUNTRIES; ENERGY (ECONOMICS); ENERGY (ECONOMICS); GRAPHS (CHARTS); ENERGY BALANCE; INTERNATIONAL ANALYSIS
AVAILABILITY: Modern Hill Book Co., New York, NY

Winfrey, R.; Howell, P.D.; Kent, P.M.
U.S. Dept. of Transportation, Federal Highway Administration, Office of Research and Development, Environmental Design and Control Division
ADDRESS: Washington, DC 20590
TITLE: Truck Traffic Volume and Weight Data for 1971 and Their Evaluation
1976, December
KEYWORDS: TRUCKS; HIGHWAY TRANSPORTATION; WEIGHT: CLASSIFICATIONS; TABLES (DATA); FUELS; TRAFFIC
AVAILABILITY: NTIS

Withrow, J.D., Jr.; Praseemchak, J.P.
Chrysler Corp.
ADDRESS: Detroit, MI
TITLE: Engines for Tomorrow's Passenger Cars Paper No. 76010, presented at the Society of Automotive Engineers' West Coast Meeting, San Francisco, California, August 9-12, 1976, 9 p.
SPOONER: Society of Automotive Engineers
KEYWORDS: ENGINES; POLLUTION CONTROL; FUEL ECONOMY; COMPARATIVE EVALUATIONS: SPARK IGNITION ENGINES; STEERING ENGINES; DIESEL ENGINES: VANE ENGINE; RAMFIS CYCLE ENGINES; STRATIFIED CHARGE ENGINES; GAS TURBINE ENGINES; POLLUTION REGULATIONS: GRAPHS (CHARTS); ELECTRIC VEHICLES; AUTOMOTIVE EMISSIONS
AVAILABILITY: Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096

Wolfe, A.C.
Michigan, University of, Highway Safety Research Institute
ADDRESS: Ann Arbor, MI 48109
TITLE: Altered State of the U.S. Dep't of Transportation, National Highway Traffic Safety Administration
KEYWORDS: BIBLIOGRAPHIES; RESEARCH; VEHICLE MILES TRAVELED; HIGHWAY TRANSPORTATION; SAFETY: ACCIDENTS; AUTOMOBILE DRIVERS; AUTOMOBILE REGISTRATIONS; TRANSPORTATION; MOTOR VEHICLES; AUTOMOBILES; TRUCKS; TRAVEL; QUESTIONNAIRES; SURVEYS
AVAILABILITY: NTIS

Wosack, J.P.
Massachusetts Institute of Technology, Center for Transportation Studies
ADDRESS: 77 Massachusetts Ave., Cambridge, MA 02139
1976, September 30
SPOONER: N.S. Dept. of Transportation, Office of the Secretary, Office of University Research KEYWORDS: CARPOOLS; VANS; BUSES (Vehicles); SIMULATIONS; PASSENGER TRANSPORTATION; PARATRANSIT: SURVEYS; URBAN TRANSPORTATION; INSURANCE: OWNERSHIP; STATE ANALYSIS
AVAILABILITY: NTIS

Woyt, V.
Pot-Electric Motors Ltd.
1976
SPOONER: Society of Automotive Engineers
KEYWORDS: ELECTRIC VEHICLES; FUEL CONSUMPTION; FUEL ECONOMY; EFFICENCY: CONSERVATION: BATTERIES; PERFORMANCE: AUTOMOBILE EMISSIONS: HYBRID ELECTRIC POWERED VEHICLES: GRAPHS (CHARTS); DRIVE TRAIN SYSTEMS: DIAGRAMS; TABLES (DATA); FUEL STORAGE
AVAILABILITY: Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096
Traffic Quarterly, 29, 571-592
1975, October
KEYWORDS: URBAN TRANSPORTATION; FUEL CONSUMPTION; PETROLEUM; ENERGY SUPPLIES; ENERGY DEMAND; ENERGY SHORTAGE; VEHICLE KILOMETERS TRAVELED; VEHICLES; EFFICIENCY; AUTOMOBILES; BUSES (Vehicles); RAIL TRANSPORTATION; VEHICLE OWNERSHIP (DATA); AUTOMOBILE OCCUPANCY; PLANNING; GRAPHS (CHARTS); MODELS

Kahler, V.
ADDRESS: 7304 Beechmore Ct., Bethesda, MD 20034
TITLE: The Effects of Transportation Systems on the Spatial Distributions of Population and Jobs

KEYWORDS: TRANSPORTATION SYSTEMS; DISTRIBUTION; PLANNING (STATISTICS); EMPLOYMENT; URBAN AREAS; URBAN TRANSPORTATION; MODELS; GRAPHS (CHARTS)

Kandel, E.; Allen, W.; Hurlock, R.N.; Glass, K.; Ellis, T.; Varner, J.
Pennsylvania, University of, Dept. of Civil and Transportation Engineering
ADDRESS: Philadelphia, PA 19174
TITLE: Transit of Solid Commodities Via Freight Pipelines. Volume I
1976

SCHOLAR: U.S. Dept. of Transportation, Office of University Research
KEYWORDS: COMMODITIES; INERTITY TRANSPORTATION; COMPARATIVE EVALUATION; CARGO TRANSPORTATION; PIPELINE TRANSPORTATION; RAIL TRANSPORTATION; HIGHWAY TRANSPORTATION; GRAPHS (CHARTS); TABLES (DATA); COSTS; MATHEMATICAL MODELS; DEMAND (ECONOMICS); ELASTIC DEMAND; ENTHUSIASM TRANSPORT; ENTHUSIASM; ENVIRONMENTAL IMPACT; TRUCKS
AVAILABILITY: PSS

Zupan, J.R.; Pushkarow, B.
Regional Plan Association
ADDRESS: New York, NY
TITLE: Where Express Buses Work
Paper published in Transportation Research Record 626, 35-36
1977
SCHOLAR: U.S. Dept. of Transportation, Urban Mass Transportation Administration; Ford Foundation; Rockefeller Foundation
KEYWORDS: RESIDENTIAL SECTOR; URBAN AREAS; CONSUMERS; BUSES (Vehicles); PARKING; PASSENGER TRANSPORTATION; COSTS
AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418
$2.20 for Transportation Research Record 626
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# Catalysts and Catalyst Supports for Automotive Gasoline Engines
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# General Aviation
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Analysis technical report to the committee of the energy research and development act of 1975.

The report focuses on the transportation energy scenario and the impact of alternative fuels on transportation and energy policies. It discusses the need for research and development to improve energy efficiency and reduce dependence on imported oil. The report also highlights the importance of alternative fuels, such as natural gas, in reducing emissions and improving energy security.

The report presents various scenarios for transportation energy consumption, including the effects of alternative fuels and technologies. It provides data on energy consumption and projections for different modes of transportation, such as automobiles, public transit, and airplanes. The report also includes information on the economic and environmental implications of alternative fuels and technologies.

The report concludes with recommendations for future research and development, including the need for more comprehensive data collection and analysis to support decision-making in the energy sector. It emphasizes the importance of collaboration between government, industry, and academia to address the challenges of energy security and sustainability.
# Transactions of the IEEE on Industry Applications: 1976 or 1977

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- **February**
  - National Energy Transportation, Volume III: The Pipeline Development
  - Tote, Under the Influence, and Sour
  - Sulfide Batteries for Electric Propulsion
  - Iron Sulfide Batteries for Load-Leveling and Electricity
  - Iron Sulfide Cells for Load-Leveling

- **March**
  - Pipeline and the United States
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  - Pipeline and the Hybrid Vehicle

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