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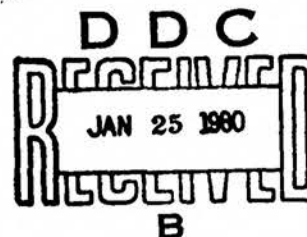
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# TRANSPORTATION ENERGY CONSERVATION DATA BOOK

A Selected, Annotated Bibliography, Edition 3

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



November 1978

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Oak Ridge National Laboratory  
Oak Ridge, Tennessee

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P. J. Carroll R. S. Weaver

Energy and Environmental Response Center  
Information Center Complex

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Oak Ridge, Tennessee 37830  
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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*<sup>1</sup> was published in October 1976. Four quarterly supplements<sup>2-5</sup> and the *Transportation Energy Conservation Data Book, Edition 1.5*<sup>6</sup> were issued to augment the original document; each included an annotated bibliography. In October 1977, *Transportation Energy Conservation Data Book, Edition 2*<sup>7</sup> was published. As a result of the extensive development of the collection

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<sup>1</sup>A. S. Loeb1, D. J. Bjornstad, D. F. Burch, E. B. Howard, J. F. Hull, D. G. Madewell, N. S. Malthouse, and M. C. Ogle. 1976. *Transportation energy conservation data book, edition 1*. ORNL-5198. Oak Ridge National Laboratory, Oak Ridge, Tenn.

<sup>2</sup>D. B. Shonka and A. S. Loeb1. 1976. *Transportation energy conservation data book, supplement I*. ORNL-5232. Oak Ridge National Laboratory, Oak Ridge, Tenn.

<sup>3</sup>D. B. Shonka. 1977. *Transportation energy conservation data book, supplement II*. ORNL-5247. Oak Ridge National Laboratory, Oak Ridge, Tenn.

<sup>4</sup>A. S. Loeb1. 1977. *Transportation energy conservation data book, supplement III*. ORNL-5248. Oak Ridge National Laboratory, Oak Ridge, Tenn.

<sup>5</sup>D. B. Shonka, A. S. Loeb1, and P. D. Patterson. 1977. *Transportation energy conservation data book, supplement IV*. ORNL-5248. Oak Ridge National Laboratory, Oak Ridge, Tenn.

<sup>6</sup>D. B. Shonka, A. S. Loeb1, M. C. Ogle, M. L. Johnson, and E. B. Howard. 1977. *Transportation energy conservation data book, edition 1.5*. CONS/7405-1. U.S. Energy Research and Development Administration, Washington, D.C.

<sup>7</sup>D. B. Shonka, A. S. Loeb1, and P. D. Patterson. 1977. *Transportation energy conservation data book, edition 2*. ORNL-5320. Oak Ridge National Laboratory, Oak Ridge, Tenn.

of documents relevant to transportation energy conservation, *Transportation Energy Conservation Data Book: A Selected, Annotated Bibliography, Edition 2*<sup>8</sup> was 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*<sup>9</sup> 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.

Philip D. Patterson  
Data Analysis Branch  
Nonhighway Transport Systems and  
Special Projects  
Division of Transportation Energy  
Conservation  
Office of the Assistant Secretary for  
Conservation and Solar Applications  
Department of Energy  
(Telephone: 202-376-4616)

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<sup>8</sup>E. B. Howard, B. Y. Barber, A. C. Jordan, and C. C. Seaborn. 1977. *Transportation energy conservation data book: a selected, annotated bibliography, edition 2*. ORNL/EIS-114 (Part 2 of ORNL-5320). Oak Ridge National Laboratory, Oak Ridge, Tenn.

<sup>9</sup>D. B. Shonka, ed. 1978. *Transportation energy conservation data book, edition 3*. ORNL-5493. Oak Ridge National Laboratory, Oak Ridge, Tenn.

#### 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 information support provided by the Energy and Environmental Response Center (EERC) to the Energy Division of the Oak Ridge National Laboratory. The EERC maintains an on-line bibliographic data base documenting energy conservation and consumption in various 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 statistical 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 references. 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 Transportation 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 description	—————→	Final Report, Report No. DOE/NASA/3152-78/1, NASA CR-135382, 370 p.
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.<sup>1</sup> 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:

$$\text{on-road miles per gallon} = \alpha + \beta * (\text{test miles per gallon}). \quad (1)$$

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

Source	Model year	Total number of data points	Fleet operations	Owners estimates	Consumer driving	Dynamometer tests <sup>a</sup>	Road tests <sup>a</sup>
EPA certification	1974-1977	1831				C	
Union Oil	1975	107				C	S
Dupont	1974-1976	66			X	C	
General Motors	1975-1976	1714			X		
Mobil Oil	1974-1977	63			X	C	
Shell Oil	1975-1977	30			X	C	
Motor Trend	1974-1977	121					O
Shell Canada	1975	46			X	C	
Consumer Letters	1974-1977	134		X			
Consumers Union	1975-1977	83					O
TRW	1974-1977	77	X				
Maryland Department of Transportation	1974-1977	845	X				
Maine Department of Transportation	1974-1977	18	X				
EPA emission factors data	1974-1976	1287		X		C	
Industrial hydrocarbons	1976	1	X				
J. Glass Leasing	1977	5	X				
New Jersey Department of Transportation	1974-1975	211	X				
Texaco Oil	1974-1977	38			X	C	
EPA	1974-1976	687	X				
API	1974-1975	4075	X				
AT&T	1976	3	X				
Amoco Oil	1974-1977	156			X		

<sup>a</sup>Driving cycle: C - certification test procedure; S - SAE driving cycle; O - other.

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. Tables 2a and 2b.

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.

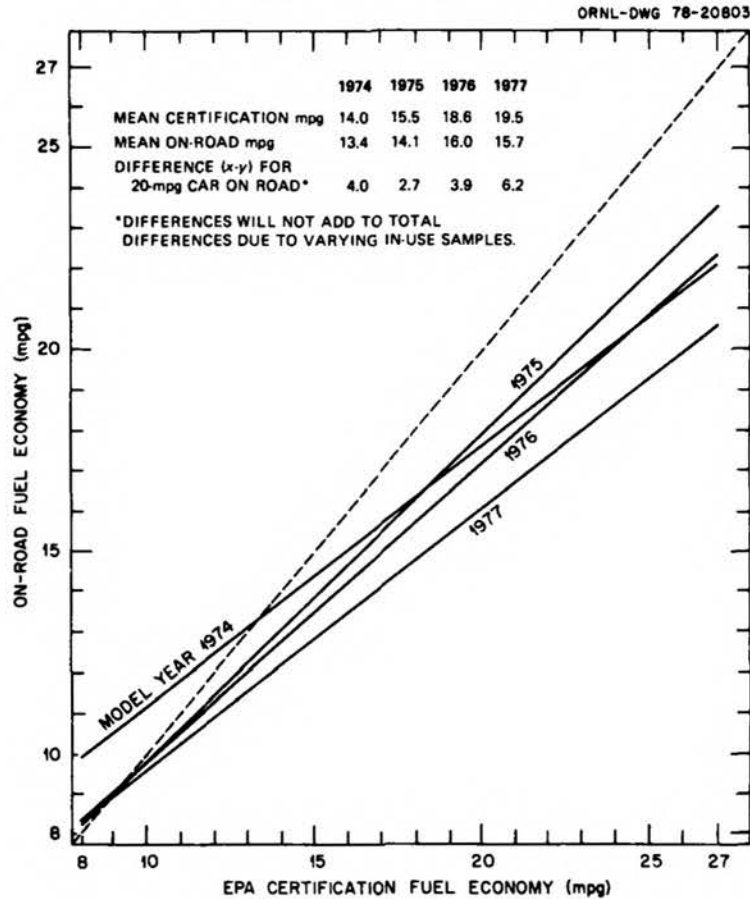


Fig. 1. Linear relation of EPA certification to on-road fuel economy for model years 1974 through 1977. Source: Compiled from B. D. McNutt, D. Pirkey, R. Dulla, and C. Miller. 1978. A comparison of fuel economy results from EPA tests and actual in-use experience, 1974-1977 model year cars. U.S. Department 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

1. McNutt, B. D., 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.

Reviewed by  
Margaret Fels  
Princeton University  
Princeton, New Jersey

THE CONGRESSIONAL BUDGET OFFICE'S REPORT ON  
ENERGY USE BY URBAN TRANSPORTATION MODES

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.<sup>1</sup> 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 intensiveness* 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



ORNL-DWG 78-21634

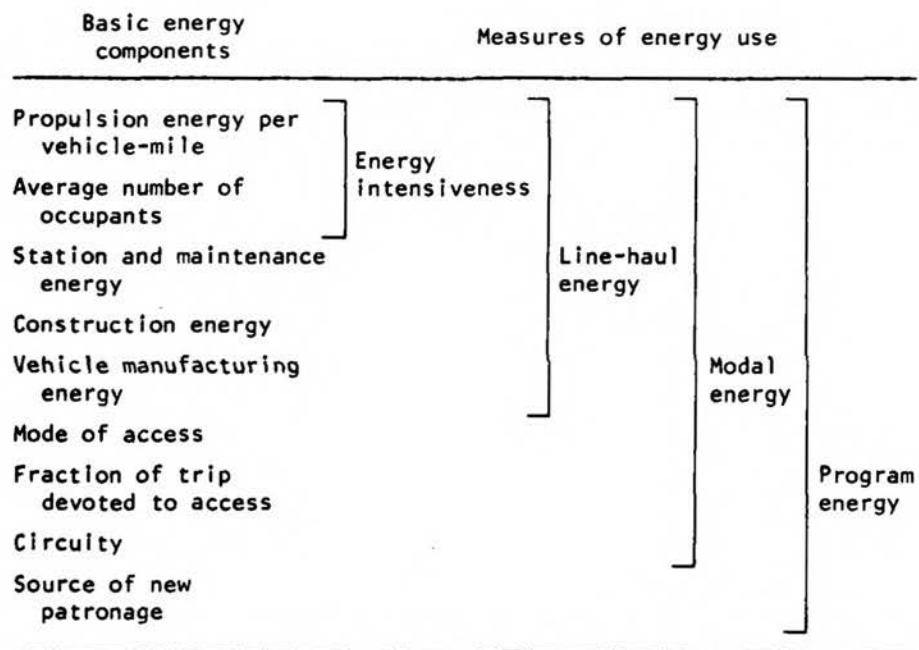


Fig. 1. Hierarchy of measures of energy use. Source: Adapted from D. Kulash, R. Mudge, and D. Prywse. 1977. Urban transportation and energy: The potential savings of different modes. Congressional Budget Office report to U.S. Senate Committee on Environment and Public Works. Serial No. 95-8. p. 8.

Table 1. Various estimates of vehicle propulsion energy for urban transportation modes: averages for general urban areas and specific cities (systems)

Mode of transportation	Vehicle propulsion energy <sup>a</sup>		City (system)
	(mpg) <sup>b</sup>	(Btu/mile)	
Automobile	7.5	16,790	General urban (six seat) <sup>c</sup>
	11.4	10,970	General urban <sup>d</sup>
	13.5	9,260	General urban <sup>e</sup>
	13.9	8,990	New York metropolitan area (1972) <sup>f</sup>
	15.0	8,330	General urban (four seat) <sup>c</sup>
	22.5	5,260	General urban (light car) <sup>g</sup>
Vanpool	9.0	13,900	Minneapolis <sup>h</sup>
Dial-a-ride	4.2	29,780	Los Angeles <sup>i</sup>
	7.0	17,850	General urban (gas vehicle) <sup>g</sup>
	7.3-9.0	13,900-17,130	Nine cities <sup>j</sup>
	13.5	9,250	General urban (diesel vehicle) <sup>g</sup>
Heavy rail (old)	0.52	241,240	New York City (Staten Island Rapid Transit) <sup>k</sup>
	0.52	240,880	Boston (includes light rail) <sup>k</sup>
	1.33	93,830	Cleveland <sup>k</sup>
	1.35	92,560	New York City (Transit Authority) <sup>k</sup>
	1.44	86,680	Philadelphia <sup>k</sup>
	1.71	73,180	New York City (Transit Authority) <sup>f</sup>
	1.72	72,880	New York/New Jersey (PATH) <sup>k</sup>
	2.02-3.31	37,800-62,000	Five cities (1964) <sup>l</sup>
	2.04	61,400	New York City (Transit Authority) <sup>m</sup>
	2.09	59,800	New York/New Jersey (PATH) <sup>m</sup>
	2.41	51,879	Chicago <sup>k</sup>
	4.00	31,300	Cleveland <sup>e</sup>

Table 1 (continued)

Mode of transportation	Vehicle propulsion energy <sup>a</sup>		City (system)
	(mpg) <sup>b</sup>	(Btu/mile)	
Heavy rail (new)	1.07	117,100	San Francisco (BART) <sup>k</sup>
	1.15	109,020	Philadelphia (Lindenwold) <sup>k</sup>
	1.23	101,780	San Francisco (BART) <sup>n</sup>
	1.44	86,900	Philadelphia (Lindenwold) <sup>o</sup>
	1.45	86,100	Philadelphia (Lindenwold) <sup>m</sup>
	1.78	70,080	San Francisco (BART, actual) <sup>m</sup>
	2.13	58,800	San Francisco (BART, projected) <sup>m</sup>
	2.23	56,175	San Francisco (BART, actual) <sup>p</sup>
	2.57-2.84	44,000-48,580	San Francisco (BART, projected) <sup>p</sup>
Commuter rail	0.80	154,500	San Francisco <sup>i</sup>
	0.96	129,900	San Francisco <sup>k</sup>
	1.14	109,350	Chicago (average) <sup>k</sup>
	1.21	103,500	New York (average) <sup>k</sup>
	1.21	103,000	Philadelphia (average) <sup>k</sup>
	1.27	98,213	Boston <sup>k</sup>
	1.80-2.90	43,150-69,540	Several cities (1964) <sup>l</sup>
Light rail	1.19	105,000	Philadelphia (SEPTA, city) <sup>g</sup>
	1.45	86,400	Philadelphia (SEPTA, Red Arrow) <sup>g</sup>
	1.54	81,284	Pittsburgh <sup>k</sup>
	1.66	75,147	San Francisco (MUNI) <sup>k</sup>
	2.17	57,750	Rochester (proposed) <sup>i</sup>
	2.41	51,992	Newark <sup>k</sup>
Bus	3.6	34,940	New York City (Transit Authority) <sup>f</sup>
	3.6	34,740	General urban (local bus) <sup>i</sup>
	3.8	32,660	General urban <sup>g</sup>
	4.0	31,270	Atlanta (1976) <sup>q</sup>

Table 1 (continued)

Mode of transportation	Vehicle propulsion energy <sup>a</sup>		City (system)
	(mpg) <sup>b</sup>	(Btu/mile)	
	4.1	30,500	Cleveland <sup>c</sup>
	4.4	28,430	Atlanta (projected, 2000) <sup>q</sup>
	4.8	26,310	Northern New Jersey <sup>f</sup>
	4.8	26,060	General urban (express bus) <sup>r</sup>
	5.6	22,330	Oakland (efficient bus) <sup>p</sup>
Personal rapid transit	6.2-13.1	9,560-20,205	Two systems <sup>g</sup>
	9.6-31.0	4,030-13,000	General urban <sup>c</sup>
Group rapid transit	4.2-15.4	8,100-30,000	General urban <sup>c</sup>
Shuttle loop transit	7.4-11.4	11,000-17,000	General urban <sup>c</sup>
	5.3	23,800	Dallas (Airtrans) <sup>c</sup>
	5.0	25,200	Dallas (Airtrans) <sup>r</sup>
Downtown people mover	1.75	71,400	Los Angeles (proposed) <sup>8</sup>

<sup>a</sup>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.

<sup>b</sup>Miles per gallon of gasoline or equivalent.

<sup>c</sup>Tucker, H. L., Jr. 1977. Energy efficiency of urban transit systems. Presented at Fourth National Conference on the Effect of Energy Constraints on Transportation.

<sup>d</sup>Pratt, R. H., et al. 1976. The potential for transit as an energy saving option. Prepared for Federal Energy Administration.

<sup>e</sup>American Public Transit Association. 1976. Transit fact book, 75-76 ed. p. 46.

<sup>f</sup>Tri-State Regional Planning Commission. 1975. Energy propulsion efficiency of tri-state ground modes of passenger transportation. Interim Technical Report 4502-2601. pp. 12, 48.

<sup>j</sup>Fels, M. 1975. Comparative energy costs of urban transportation systems. Trans. Res. 9:197-308.

<sup>n</sup>Ownes, R. D., and H. L. Sever. 1977. The 3M commute-a-van program. Pages 146-174 in Urban transportation efficiency. American Society of Civil Engineers.

<sup>2</sup>Healy, T. 1977. Energy demands of urban transit systems. In Proceedings of the Third National Conference on the Effects of Energy Constraints on Transportation. Energy Research and Development Administration.

<sup>j</sup>Ewing, R., and N. Wilson. 1976. Innovations in demand-responsive transit. Prepared for U.S. Department of Transportation.

<sup>k</sup>Stanford Research Institute. 1977. Railroad energy study: Description of rail transportation in the United States. Vol. II, Rail passenger transportation. Prepared for the Energy Research and Development Administration. pp. 13-10 to 13-12. (Data may include station and maintenance energy as well as traction energy.)

<sup>l</sup>Lang and Soberman. 1964. Urban rail transit: Its economics and technology. Massachusetts Institute of Technology Press. (Traction energy only).

<sup>m</sup>Fels, M. 1977. Breakdown of energy costs for rapid rail systems. The Center for Environmental Studies, Princeton University. Report PU/CES 44. (To be published in Energy).

<sup>n</sup>Lave, C. 1977. Rail rapid transit: The modern way to waste energy. Social Science Working Paper 122. University of California at Irvine.

<sup>o</sup>Boyce, D. E. 1975. Impact of a suburban rapid transit line on fuel consumption and cost for the journey to work. Prepared for Federal Energy Administration.

<sup>p</sup>Usowicz, T. W., and M. M. Hawley. 1977. Discussion paper. San Francisco Bay Area Rapid Transit District.

<sup>q</sup>Metropolitan Atlanta Rapid Transit Authority. No date. The effects of MARTA on gasoline consumption in the Atlanta region.

<sup>r</sup>Bowe, J., et al. 1976. Assessment of operational automated guideway systems - Airtrans (phase I). Transportation Systems Center Report UMTA-MA-06-0067-76-1. p. 5-11.

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 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)

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

Table 2 (continued)

Mode and city (system)	Vehicle occupancy (passenger-miles per vehicle-mile)	Load factor (passenger-miles per seat-mile)
New York City (Transit Authority) <sup>e</sup>	13.8	0.28
Baltimore <sup>d</sup>	19.1	0.28
National urban area average, 1973 <sup>h</sup>	11.5	0.23
Dial-a-ride		
Nine cities <sup>h</sup>	1.00-2.86	0.05-0.15
Seven cities <sup>i</sup>	0.8-3.3	0.04-0.17
Median	1.62	0.09
Commuter rail		
Average for specific cities		
New York metropolitan area <sup>f</sup>	24.2	0.24
Boston <sup>f</sup>	25.6	0.26
Philadelphia <sup>f</sup>	29.4	0.29
New York metropolitan area <sup>e</sup>	32.2	0.32
Chicago <sup>f</sup>		
Burlington Northern	58.7	0.59
Chicago and Northwestern	47.7	0.48
Illinois Central	59.5	0.60
Milwaukee	50.2	0.50
Norfolk and Western	20.7	0.21
Rock Island <sup>f</sup>	36.7	0.37
San Francisco <sup>f</sup>	47.5	0.48
National urban area average <sup>h</sup>	42.6	0.43
Vanpool		
Minneapolis (3M Company) <sup>j</sup>	10.5	0.87
Carpool		
New York/New Jersey (Port Authority) <sup>k</sup>	2.94	0.59
El Segundo, California <sup>l</sup>	3.09	0.62
Boston <sup>m</sup>	3.16	0.63
Connecticut <sup>n</sup>	3.70	0.74

<sup>a</sup>U.S. Department of Transportation, Federal Highway Administration. 1972. National personal transportation study. Report No. 1.

<sup>b</sup>Boyce, D. E., et al. 1975. Impact of a suburban rapid transit line on fuel consumption and cost for the journey to work. Prepared for Federal Energy Administration.

<sup>c</sup>Lutin, J. 1976. Energy savings for work trips: Analysis of alternative commuting patterns for New Jersey. Transportation Research Record 561. pp. 23-26.

<sup>d</sup>Pratt, R. H., et al. 1976. The potential for transit as an energy saving option. Prepared for Federal Energy Administration.

- <sup>e</sup>Tri-State Regional Planning Commission. 1975. Energy propulsion efficiency of tri-state ground modes of passenger transportation. Interim Technical Report 4502-2601. pp. 12, 48. (Data are for 1972.)
- <sup>f</sup>Stanford Research Institute. 1977. Railroad energy study: Description of rail transportation in the United States. Vol. II, Rail passenger transportation. Prepared for Energy Research and Development Administration.
- <sup>g</sup>Ellis, R., and A. Sherret. 1976. Transportation and travel impact of BART, interim service findings. Peat Marwick, Mitchell and Company.
- <sup>h</sup>Stuntz, M. S., Jr., and E. Hirst. 1975. Energy conservation potential of urban mass transit. Prepared for Federal Energy Administration, Conservation Paper No. 34.
- <sup>i</sup>Ewing, R., and N. Wilson. 1976. Innovations in demand-responsive transit. Prepared for U.S. Department of Transportation. p. 13.
- <sup>j</sup>Owens, R., and H. Sever. 1977. The 3M commute-a-van program. Pages 146-174 in Urban transportation efficiency. American Society of Civil Engineers.
- <sup>k</sup>O'Malley, B. 1977. Port Authority carpool program telephone follow-up survey. Pages 125-145 in Urban transportation efficiency. American Society of Civil Engineers.
- <sup>l</sup>Federal Highway Administration. 1975. Carpool incentive and opportunities.
- <sup>m</sup>Heaton, C. 1976. Case study evaluation of the Boston area carpooling program. Prepared for the U.S. Department of Transportation.
- <sup>n</sup>Gudatis, C. 1977. Successful approaches to increased ride sharing in Connecticut. In Urban transportation efficiency. American Society of Civil Engineers.



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

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

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. Table 7.

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

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

<sup>a</sup>NA - Not applicable.

<sup>b</sup>There is no diversion from a former mode; a person who previously did not use a mode of urban transportation is using the new mode.

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. Table 8.

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

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

<sup>a</sup>By definition, there are no access energy requirements for automobiles, so modal energy equals line-haul energy.

<sup>b</sup>NA - Not applicable.

<sup>c</sup>Energy loss.

<sup>d</sup>For new express bus service. Conventional bus service would show smaller savings.

<sup>e</sup>Data not available for access modes and source of patronage since these modes are still largely under development.

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. Table 9.

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, circuitities, 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.<sup>2</sup> 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.

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1. Kulash, D., 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.
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Reviewed by  
Margaret Fels  
Princeton University  
Princeton, New Jersey

THE ENERGY INFORMATION ADMINISTRATION'S 1977  
ANNUAL REPORT TO CONGRESS

The *Energy Information Administration 1977 Annual Report to Congress*<sup>1</sup> 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.

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1. Energy Information Administration. 1978. Energy Information Administration 1977 annual report to Congress. 3 vols. DOE/EIA-0036/1. U.S. Department of Energy, Washington, D.C.

Reviewed by  
Gwendolyn H. Walton  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee

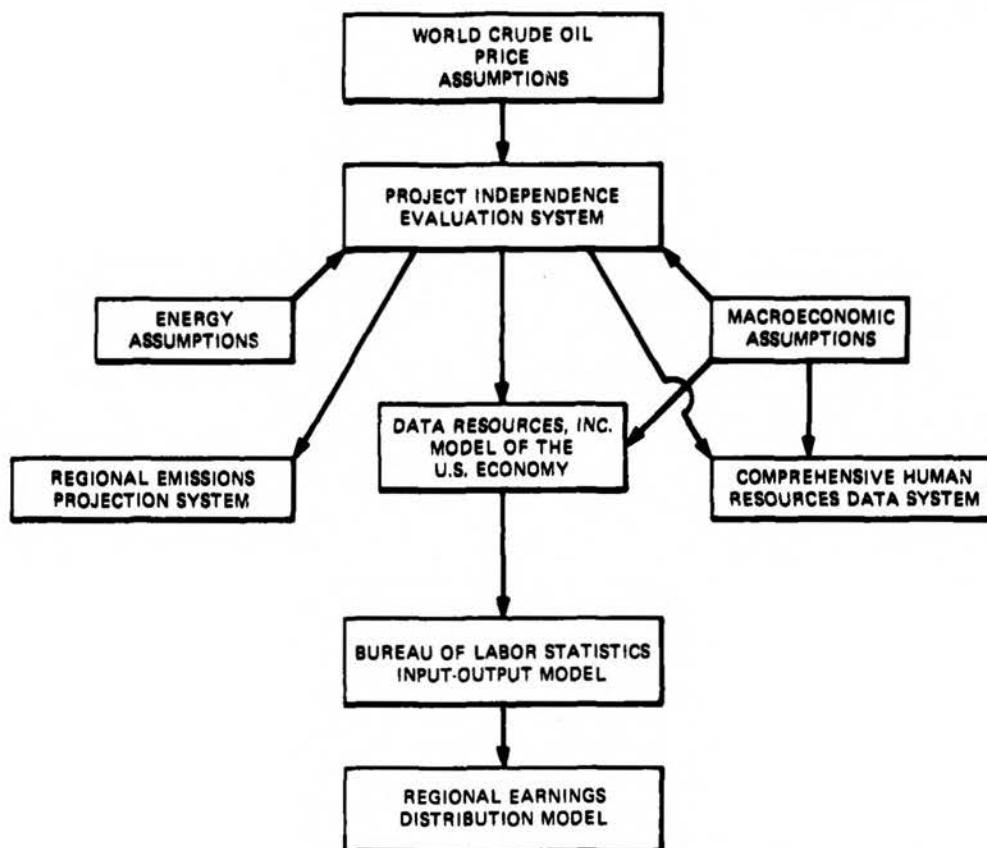


Fig. 1. Schematic representation of the energy/economic/environmental assessment system. Source: Adapted from Energy Information Administration. 1978. Energy Information Administration 1977 annual report to Congress, Vol. II. DOE/EIA-0036/1. U.S. Department of Energy, Washington, D.C. Fig. 2, p. 5.

THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM'S  
REPORT ON ENERGY INTENSITY OF TRANSPORTATION MODES

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

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\*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

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\*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.

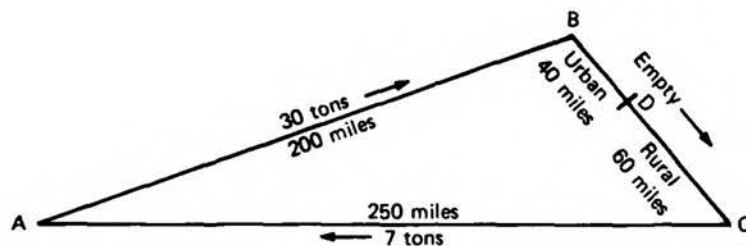
location with only one possible means of transportation (usually the automobile), a fair comparison cannot be made with other means of transport. Direct energy consumption and energy intensity alone are not always worthwhile information. Other factors such as the time factor and the hourly monetary value 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

ORNL-DWG 78-20001



Full load out, long dead head for partial return load

A-B loaded, 30 tons, 200 miles at 3.5 mpg = 57.14 gal  
 C-A loaded, 7 tons, 250 miles at 4.8 mpg = 52.08 gal  
 37 tons 109.22 gal

Ton-miles = (30 tons) × (200 miles) = 6000 ton-miles  
 (7 tons) × (250 miles) = 1750 ton-miles  
 7750 ton-miles

B-D Empty, 60 miles at 6 mpg = 10.00 gal  
 D-C Empty, 40 miles at 3 mpg (urban stop and go) = 13.33 gal  
 23.33 gal

Total = 132.55 gal

Ton-miles/gal = 7750 ton-miles ÷ 132.55 gal = 58.47 ton-miles/gal  
 Tons shipped per gallon = 37 tons ÷ 132.55 gal = 0.2791 ton/gal  
 Empty mileage of 100 miles ÷ 550 miles = 18.18%

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  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee

## OAK RIDGE NATIONAL LABORATORY'S REPORTS ON GASOLINE DEMAND

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

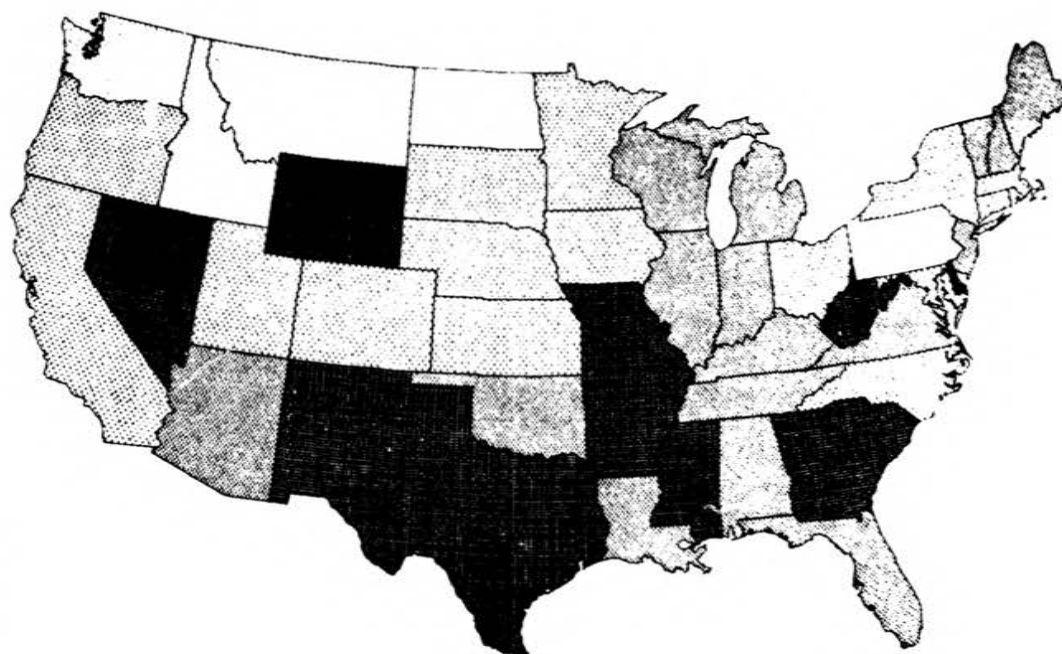
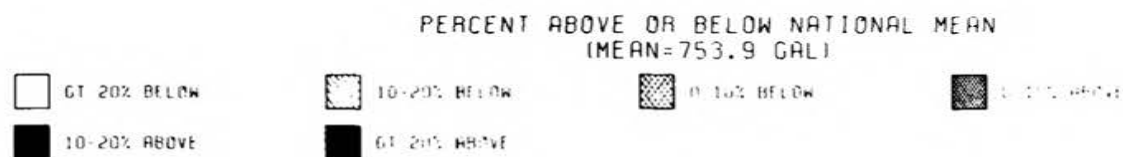


Fig. 1. 1975 gasoline consumption per vehicle. Source: An investigation of the variability of gasoline consumption among states. ORNL-5391. Oak Ridge National Laboratory, Oak Ridge, Tenn. Fig. 2, p. 7.

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. Highway 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

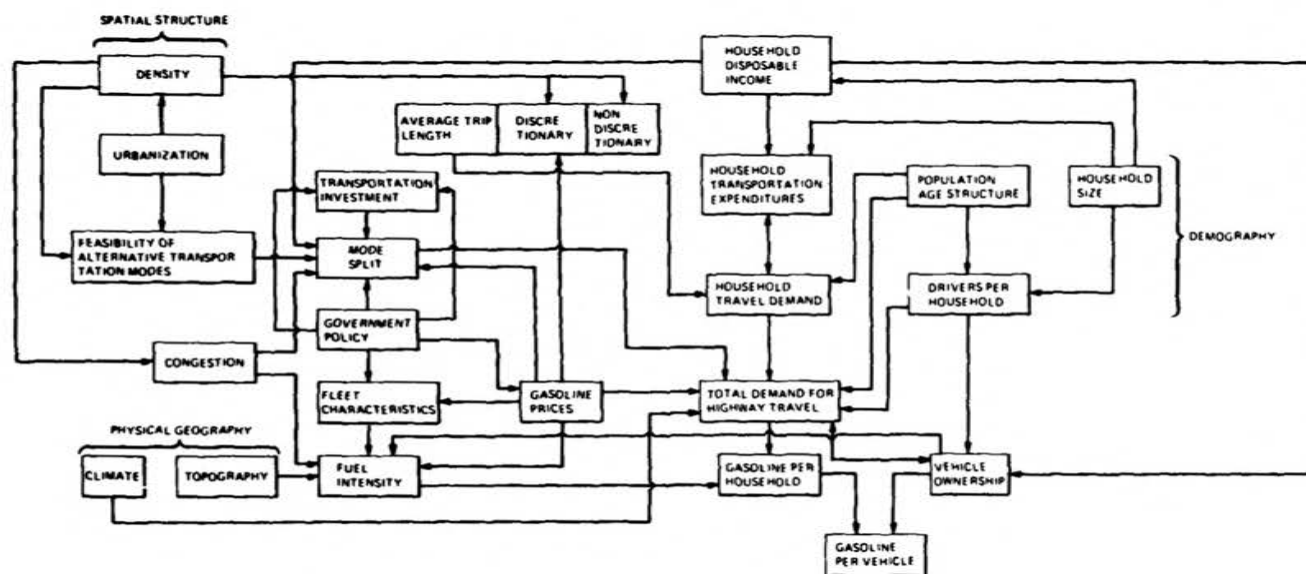


Fig. 2. Gasoline consumption per vehicle at the state level: a conceptual diagram. Source: An investigation of the variability of gasoline consumption among states. ORNL-5391. Oak Ridge National Laboratory, Oak Ridge, Tenn. Fig. 6, p. 20.



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  
David L. Greene  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee

## SRI'S REPORT ON DIESEL CARS IN THE UNITED STATES

The SRI report *Diesel Cars in the United States*,<sup>1</sup> 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 NO<sub>x</sub> 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.
6. Opinions of owners: results of marketing surveys.

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

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Reviewed by  
Charles Lave and Kenneth Chomitz  
University of California, Irvine

## SRI'S REPORTS ON RAILROAD PASSENGER AND FREIGHT TRANSPORTATION

SRI has produced two companion studies, *Energy Study of Rail Passenger Transportation*<sup>1</sup> and *Energy Study of Railroad Freight Transportation*.<sup>2</sup> 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."<sup>2</sup> 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.

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Reviewed by  
 Richard Weissbrod  
 Johns Hopkins University  
 Baltimore, Maryland

## 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.<sup>1</sup>

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  
University of California, Irvine

## 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<sup>1</sup> 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  $\text{NO}_x$  standard of 0.4 gpm, if enforced (diesels meet the current  $\text{NO}_x$  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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Reviewed by  
Margaret Fels  
Princeton University  
Princeton, New Jersey

## THE WHARTON EFA AUTOMOBILE DEMAND MODEL

The Wharton EFA Automobile Demand Model<sup>1</sup> 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."<sup>1</sup> 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."<sup>1</sup> 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

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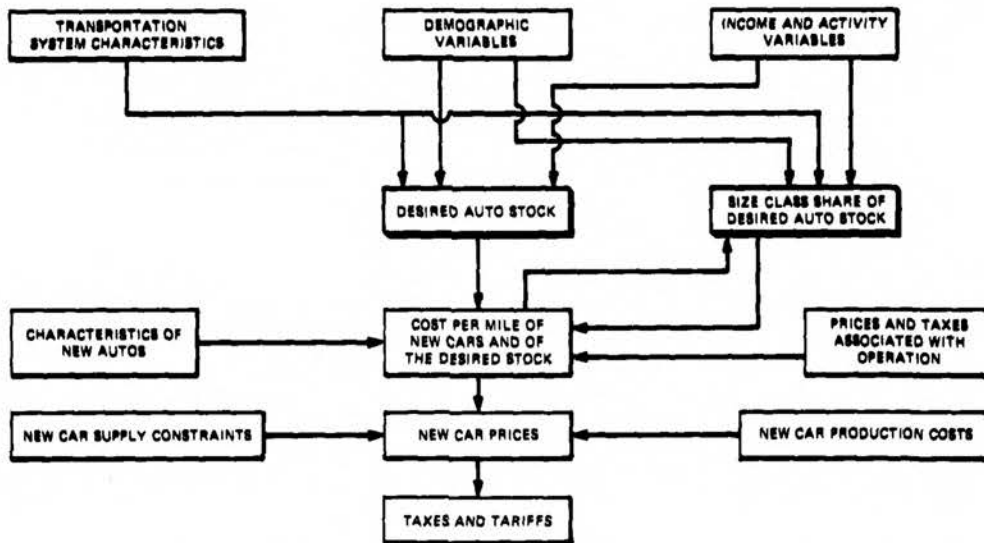


Fig. 1. Basic structure of the Wharton model. Long-run outputs are in boldfaced boxes. Source: Adapted from G. R. Schink and C. J. Loxley. 1977. An analysis of the automobile market: Modeling the long-run determinants of the demand for automobiles, Vol. I. Wharton EFA, Inc., Philadelphia. Chart 3B, p. 3-52.

stock model is an updated version of the familiar stock adjustment model introduced in the 1950s by Chow<sup>2</sup> and Nerlove.<sup>3</sup> 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<sup>4</sup>), 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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Reviewed by  
David L. Greene  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee

REPORTS SPONSORED BY DIVISION OF TRANSPORTATION ENERGY  
CONSERVATION, DEPARTMENT OF ENERGY

Aerospace Corp., Environment and Energy  
Conservation Division, Mobile Systems Group  
ADDRESS: El Segundo, CA 90245  
TITLE: Lean Combustion in Automotive Engines: An  
Assessment of the Addition of Hydrogen to  
Gasoline as Compared to Other Techniques

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1976, February

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TABLES (DATA); GRAPHS (CHARTS); ENGINES;  
AUTOMOBILES; AUTOMOTIVE FUELS; HYDROGEN  
FUELS; HYDROGEN STORAGE; PERFORMANCE  
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Airesearch Manufacturing Co.  
TITLE: Study of Heat Engine/Flywheel: Hybrid  
Propulsion Configuration with Electrical  
Transmission System. Phase II Final Report:  
Design Definition

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1978, April

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TRANSMISSIONS; SIZE; WEIGHT; PERFORMANCE;  
INITIALS; COSTS; DIAGRAMS

Airesearch Manufacturing Co.  
TITLE: Study of Heat Engine/Flywheel: Hybrid  
Propulsion Configuration with Electrical  
Transmission System. Phase I: Final Report

Report No. ALO-81/1, v.p.  
1978, April

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: HYBRID ELECTRIC-POWERED VEHICLES;  
FLYWHEELS; AUTOMOBILE TRANSMISSIONS; DRIVING  
CYCLE; FUEL CONSUMPTION; COMPARATIVE  
EVALUATIONS; COSTS; DIAGRAMS; GRAPHS  
(CHARTS); DESIGN

Allen, W.N.; Larson, K.J.; Walker, B.N.  
Pratt & Whitney Aircraft Group, Government  
Products Division  
ADDRESS: P.O. Box 2691, West Palm Beach, FL  
TITLE: Process Demonstration and Cost Analysis of  
a Mass Production Forging Technique for  
Automotive Turbine Wheels: Phase II. Final  
Report, Period January 1975 Through March 1977

Report No. COO/2637-1, 75 p.  
1977, July

SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: DEMONSTRATION; PROCESSING; COST  
ANALYSIS; PRODUCTION; FORGING; TURBINES;  
AUTOMOBILES; TURBINE BLADES; ENGINES; GAS  
TURBINE ENGINES; DESIGN; MATERIALS;  
FABRICATION; ROTORS; MANUFACTURING; DIAGRAMS;  
GRAPHS (CHARTS); PHOTOGRAPHS; TABLES (DATA)  
AVAILABILITY: NTIS

Anderson, R.W.  
National Aeronautics and Space Administration,

Levis Research Center  
ADDRESS: Cleveland, OH 44135  
TITLE: Performance and Emissions of a Catalytic  
Reactor with Propane, Diesel, and Jet A Fuels

Report No. NASA TN-73786, CONWS/1011-20, paper  
presented at the Fall meeting, Western States  
Section of the Combustion Institute,  
Stanford, California, October 17-18, 1977,  
v.p.

1977, September  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: PROPANE; DIESEL FUELS; JET ENGINE  
FUELS; PERFORMANCE; COMBUSTION; NITROGEN  
OXIDES; EFFICIENCY; EMISSIONS; COMPARATIVE  
EVALUATIONS; CATALYSTS; HIGHWAY  
TRANSPORTATION; AUTOMOTIVE EMISSIONS; GRAPHS  
(CHARTS)  
AVAILABILITY: NTIS

Argonne National Laboratory  
ADDRESS: 9700 South Cass Avenue, Argonne, IL  
60439

TITLE: Development of Lithium/Metal Sulfide  
Batteries at Argonne National Laboratory:  
Summary Report for 1976

Report No. ANL-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  
UTILITIES; ELECTRIC VEHICLES;  
LITHIUM-ALUMINUM/METAL SULFIDE BATTERIES;  
DIAGRAMS  
AVAILABILITY: NTIS

Bolger, J.G.; Kirsten, F.A.  
Lawrence Berkeley Laboratory  
ADDRESS: University of California, Berkeley, CA  
TITLE: Investigation of the Feasibility of a Dual  
Mode Electric Transportation System

Report No. LBL-6301, 159 p.  
1977, May

SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: HIGHWAY TRANSPORTATION; TRANSPORTATION  
SYSTEMS; ELECTRIC VEHICLES; ENERGY STORAGE;  
DUAL MODE ELECTRIC TRANSPORTATION SYSTEM;  
TABLES (DATA); DESIGN; MAGNETIC FIELDS;  
GRAPHS (CHARTS); CALIFORNIA; COSTS; ALTERNATE  
FUELS; COMPARATIVE EVALUATIONS; SAFETY  
AVAILABILITY: NTIS

Bolger, J.G.; Wg, L.S.; Green, R.I.; Wallace, R.I.  
Lawrence Berkeley Laboratory  
ADDRESS: University of California, Berkeley, CA  
TITLE: Test of the Performance and  
Characteristics of a Prototype Inductive  
Power Coupling for Electric Highway Systems

Report No. LBL-7522, 74 p.  
1978, July

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: PERFORMANCE; TESTING; DESIGN; ELECTRIC  
VEHICLES; DRIVING CYCLE; ENERGY STORAGE;  
ELECTRIC HIGHWAY SYSTEMS; COUPLINGS; BATTERIES  
AVAILABILITY: NTIS

Booz, Allen & Hamilton Inc.  
 ADDRESS: 4330 East West Hwy., Bethesda, MD 20014  
 TITLE: Energy Use in the Marine Transportation Industry. Volume IV: Task III-Efficiency Improvements, Task IV-Industry Future

Final Report, Volume IV, v.p.

1977, December

SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation, Non-Highway Transport Systems

KEYWORDS: ENERGY CONSUMPTION; MARINE TRANSPORTATION; FORECASTING; CARGO TRANSPORTATION; GREAT LAKES; WATER TRANSPORTATION; WATERWAY TRANSPORTATION; COASTAL REGIONS; RECREATION VEHICLES; FISHING INDUSTRY; FUEL CONSUMPTION; TABLES (DATA);

Brennand, J.; Curtis, R.; Fox, H.; Hamilton, W. General Research Corp.  
 ADDRESS: P.O. Box 3587, Santa Barbara, CA 93105  
 TITLE: Electric and Hybrid Vehicle Performance and Design Goal Determination Study

Report No. SAN/1215-1, GRC Publication No.

CP-1-734, 197 P.

1977, August

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; TABLES (DATA); FUEL ECONOMY; OPERATING COSTS; GRAPHS (CHARTS); MODELS; STANDARDS; DESIGN

Bruck, H.W.; Bernier, J.; Bevilacqua, O.M.; Jones, D.W., Jr.  
 California, University of, Institute of Transportation Studies, California  
 ADDRESS: Berkeley, CA  
 TITLE: Trial Application of the Technology Implementation Planning Process: Selected New Automotive Engines

Draft Report, UCB-ITS-RR-77-11, v.p.

1977, September

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

KEYWORDS: AUTOMOTIVE ENGINES; PLANNING; TECHNOLOGY; DIESEL ENGINES; STIRLING ENGINES; FUEL EFFICIENCY; GOVERNMENT POLICIES; ALTERNATE FUELS; MANUFACTURERS; COSTS; UTILIZATION; AUTOMOTIVE INDUSTRY; PRODUCTION; COMMERCIALIZATION

Cataldo, R.I.  
 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. CONS/1044-1, NASA TM-73834, 8 p.

1978, February

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

KEYWORDS: LEAD-ACID BATTERIES; SIMULATION; ELECTRIC VEHICLES; VELOCITY; CONTROL; ELECTRIC DISCHARGES; CAPACITY; DESIGN; ENERGY LOSSES

AVAILABILITY: NTIS

Cook, J.A.; Fucinari, C.A.; Lingscheid, J.W.; Rahnke, C.J.  
 Ford Motor Co.  
 ADDRESS: Dearborn, MI  
 TITLE: Automotive Gas Turbine Ceramic Regenerator Design and Reliability Program. Final Annual Report for Period July 1, 1975 to September 30, 1976

Report No. COO-2630-18, 299 p.

1976, October

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

KEYWORDS: STIRLING ENGINES; HEAT EXCHANGERS; COSTS; PERFORMANCE; REGENERATORS; GAS TURBINE ENGINES; DIAGRAMS; GRAPHS (CHARTS); TABLES (DATA); STRESS ANALYSIS; THERMODYNAMICS

AVAILABILITY: NTIS

Cyrus, J.D.  
 Sandia Laboratories  
 ADDRESS: Albuquerque, NM 87115; Livermore, CA 94550  
 TITLE: Proceedings of the Hybrid Vehicle Interest and Capability Assessment Workshop

Report No. SAND 76-0645, conference held September 22-23, 1976, Albuquerque, New Mexico, 40 p.

1977, March

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

KEYWORDS: HYBRID ELECTRIC-POWERED VEHICLES; CONFERENCES; HEAT ENGINES; SYSTEMS ANALYSIS; STORAGE; AUTOMOTIVE CONTROL SYSTEMS

AVAILABILITY: NTIS

Davis, D.D.; Renner, R.A.; Younger, F.C.; Epps, R.C.; Lerner, S.S.  
 Lawrence Livermore Laboratory  
 ADDRESS: University of California, P.O. Box 808, Livermore, CA 94550  
 TITLE: Determination of the Effectiveness and Feasibility of Regenerative Braking Systems on 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

KEYWORDS: ELECTRIC VEHICLES; HYBRID ELECTRIC-POWERED VEHICLES; REGENERATIVE BRAKING; HISTORY; RECOVERY; UTILIZATION; FLYWHEELS; POWER TRAIN SYSTEMS; DIAGRAMS; BATTERIES; TABLES (DATA); GRAPHS (CHARTS); COSTS; FEASIBILITY

AVAILABILITY: NTIS

Davis, D.D.; Renner, R.A.; Younger, F.C.; Epps, R.C.; Lerner, S.S.  
 Lawrence Livermore Laboratory  
 ADDRESS: University of California, Livermore, CA 94550

TITLE: Determination of the Effectiveness and Feasibility of Regenerative Braking Systems on Electric and Other Automobiles. Volume II: Design Study and Analysis

Report No. UCRL-52306/2, v.p.

1977, September 9

SPONSOR: Energy Research and Development Administration, Division of Transportation Energy Conservation  
 KEYWORDS: AUTOMOBILES; ENERGY STORAGE; TECHNOLOGY; ELECTRIC VEHICLES; REGENERATIVE BRAKING; HISTORY; DEVELOPMENT; TESTING; TRANSPORTATION; COST ANALYSIS; TABLES (DATA); PATENTS; HYBRID ELECTRIC-POWERED VEHICLES; ENERGY CONSERVATION; BATTERIES  
 AVAILABILITY: NTIS

Doggett, W.W.; Meyer, R.; Heller, M.  
 International Research and Technology Corp.  
 ADDRESS: 7655 Old Springhouse Rd.; McLean, VA 22101

TITLE: Ten Scenarios of Transportation Energy Conservation Using TECHNET

Report No. INT-17200/2-R, 107 p.  
 1978, June

SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation, Data Analysis Branch  
 KEYWORDS: FORECASTING; MODELS; TRANSPORTATION; GASOLINE; RATIONING; ENERGY CONSERVATION; AUTOMOTIVE ENGINES; BRAYTON CYCLE; STIRLING ENGINES; INTERNAL COMBUSTION ENGINES; ECONOMIC IMPACT; ENERGY INTENSITY; MARKET; ENERGY CONSUMPTION; AUTOMOBILES; GROWTH; VEHICLE MILES TRAVELED; GROSS NATIONAL PRODUCT; MILEAGE; TABLES (DATA)

Donnelly, J.J., Jr.; Poessler, W.U.  
 Aerospace Corp., Environment and Energy Conservation Division, Mobile Systems Group, Office of Energy Conservation  
 TITLE: Fuel Consumption and Engine Horsepower Projections for the Highway Transportation Sector

79 p.

1978, April 28

SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation, Office of Highway Systems, Heat Engine Systems Branch  
 KEYWORDS: FUEL CONSUMPTION; HIGHWAY TRANSPORTATION; AUTOMOBILES; TRUCKS; BUSES (VEHICLES); MOTORCYCLES; MILEAGE; ENGINES; SALES; FORECASTING; WEIGHT; CLASSIFICATIONS; TABLES (DATA); SIZE; FUEL ECONOMY

Dustin, H.O.; Denington, R.J.  
 National Aeronautics and Space Administration, Lewis Research Center  
 ADDRESS: Cleveland, OH 44135  
 TITLE: Test and Evaluation of 23 Electric Vehicles for State-of-the-Art Assessment

Report No. COMS/1011-21, NASA TN-73850, paper presented at the 1978 SAE Congress, Detroit, Michigan, February 27 - March 3, 1978, 24 p.

1978  
 SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation  
 KEYWORDS: ELECTRIC VEHICLES; TESTING; HYBRID ELECTRIC-POWERED VEHICLES; REGENERATIVE BRAKING; ENERGY CONSUMPTION; TABLES (DATA); GRAPHS (CHARTS); FUEL CONSUMPTION; PERFORMANCE

Exxon Research and Engineering Co., Government Research Laboratories, Science Application Inc., Combustion and Propulsion Technology Division  
 ADDRESS: EPRI, P.O. Box 8, Linden, NJ 07036;

SAI, 20335 Ventura Boulevard, Suite 423, Woodland Hills, CA 91368  
 TITLE: Fundamental Characterization of Alternate Fuel Effects in Continuous Combustion Systems

Report No. TID-28463, Technical Progress Report No. 1, v.p.

1978, January 11

SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation  
 KEYWORDS: ALTERNATE FUELS; COMBUSTION; CHEMICAL PROPERTIES; MODELS; COMBUSTION PROPERTIES; MODFIS; GAS TURBINE ENGINES; HYDROGEN; NITROGEN; THERMODYNAMIC PROPERTIES; TURBULENT FLOW; DROPLETS; SPRAYS; DECOMPOSITION; OXIDATION; GRAPHS (CHARTS)  
 AVAILABILITY: NTIS

Foster, R.W.  
 Miami, University of, Ryder Program in Transportation; Escher Technology Associates  
 ADDRESS: 50, Coral Gables, FL 33124; ETA, St John's, MI  
 TITLE: Alternative Fuels and Intercity Trucking

Report No. HCP/H3294-01, 302 p.  
 1978, June

SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation  
 KEYWORDS: ALTERNATE FUELS; TRUCKS; INTERCITY TRANSPORTATION; TECHNOLOGY ASSESSMENT; ENERGY CONSERVATION; DIESEL ENGINES; TRACTORS; INTERNAL COMBUSTION ENGINES; FUEL CONSUMPTION; HIGHWAY TRANSPORTATION; OWNERSHIP; EMPTY BACKHAUL; ENERGY RESOURCES; COMMERCIALIZATION; DESIGN; DEMONSTRATION; TABLES (DATA); DIAGRAMS  
 AVAILABILITY: NTIS

Foster, R.W.; Escher, W.J.D.  
 Escher Technology Associates  
 ADDRESS: St. Johns, MI  
 TITLE: Hydrogen-Fueled Railroad Motive Power Systems, A Feasibility Study

Report No. COMS/4707-1, ETA-PR-70, 250

1976, September

SPONSOR: Energy Research and Development Administration, Division of Transportation Energy Conservation  
 KEYWORDS: HYDROGEN FUELS; RAIL TRANSPORTATION; ALTERNATE FUELS; FEASIBILITY; LOCOMOTIVES; DIESEL ENGINES; INTERNAL COMBUSTION ENGINES; MODIFICATIONS; PERFORMANCE; PHOTOGRAPHS; TABLES (DATA); GRAPHS (CHARTS)  
 AVAILABILITY: NTIS

Goen, P.L.; Ivary, M.E.  
 SRI International, Center for Resource and Environmental Systems, Chemicals and Resources Group  
 ADDRESS: Menlo Park, CA 94025  
 TITLE: Diesel Cars in the United States

72 p.

1978, August

SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation  
 KEYWORDS: MOTOR VEHICLES; DIESEL ENGINES; TRUCKS; AUTOMOTIVE EMISSIONS; STANDARDS; DIESEL FUELS; MARKETING; FUEL ECONOMY; COSTS; MANUFACTURERS; TECHNOLOGY; GASOLINE; SURVEYS; CONSUMERS; TABLES (DATA); ELECTRIC VEHICLES; PRODUCTION; SALES; AUTOMOBILES

Greene, D.L.; O'Connor, T.P.  
Oak Ridge National Laboratory, Energy Division,  
Regional and Urban Studies Section  
ADDRESS: Oak Ridge, TN 37830  
TITLE: An Investigation of the Variability of  
Gasoline Consumption Among States

Report No. ORNL-5391, 61 p.  
1978, April

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

KEYWORDS: DETERMINANTS; GASOLINE; FUEL  
CONSUMPTION; MODELS; STATE ANALYSIS;  
SOCIO-ECONOMIC FACTORS; AGE GROUPS;  
EMPLOYMENT; TOURISM; VEHICLE MILES TRAVELED;  
VEHICLE REGISTRATIONS; AUTOMOBILES;  
OWNERSHIP; AUTOMOBILE DRIVERS; ENERGY DEMAND;  
COMPARATIVE EVALUATIONS  
AVAILABILITY: NTIS

Greene, D.L.; O'Connor, T.P.; Patterson, P.D.;  
Rose, A.B.; Shonka, D.B.  
Oak Ridge National Laboratory, Energy Division,  
Regional and Urban Studies Section  
ADDRESS: Oak Ridge, TN 37830  
TITLE: Regional Transportation Energy  
Conservation Data Book. Edition 1

Report No. ORNL-5435 Special, 530 p.  
1978, September

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: REGIONAL ANALYSIS; ENERGY CONSERVATION;  
HIGHWAY TRANSPORTATION; FUEL CONSUMPTION; AIR  
TRANSPORTATION; RAIL TRANSPORTATION; MARINE  
TRANSPORTATION; PIPELINE TRANSPORTATION;  
POPULATION (STATISTICS); ENERGY SUPPLIES;  
STATE ANALYSIS; TABLES (DATA); INTERNATIONAL  
ANALYSIS; VEHICLE MILES TRAVELED; MAPS;  
GRAPHS (CHARTS); TRANSPORTATION MODE CHOICE;  
TRAVEL; GASOLINE; AUTOMOBILES; TRUCKS; BUSES  
(VEHICLES); DIESEL FUELS; NATURAL GAS;  
TONNAGE; BOATS; CARGO TRANSPORTATION;  
FORECASTING; IMPORTS; PETROLEUM; COMPARATIVE  
EVALUATIONS  
AVAILABILITY: NTIS

Gulf Research and Development Co.  
ADDRESS: Pittsburgh, PA  
TITLE: Passenger Car Fuel Economy in Short Trip  
Operation: Alternative Fuels Utilization  
Program

Report No. HCF/V4248, v.p.  
1978, July

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: VEHICLE TRIPS; DISTANCE; AUTOMOBILES;  
FUEL ECONOMY; GASOLINE; FUEL ADDITIVES;  
TESTING; DRIVING CYCLE; DYNAMOMETERS; OCTANE;  
SEASONAL VARIATIONS; AUTOMOTIVE EMISSIONS  
AVAILABILITY: GPO, Stock No. 061-000-00112-3

Hamilton, W.  
General Research Corp.  
ADDRESS: Santa Barbara, CA 93105  
TITLE: Electric Car Technology for Demonstration  
and Development

Paper presented at the Fourth National Conference  
on the "Effects of Energy Constraints on  
Transportation Systems," held at Union  
College, Schenectady, New York, on August  
1-5, 1977, 26 p.

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

Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; TECHNOLOGY;  
DEMONSTRATION; DEVELOPMENT; NICKEL-ZINC  
BATTERIES; BATTERIES; LITHIUM-ALUMINUM/METAL  
SULFIDE BATTERIES; LEAD-ACID BATTERIES;  
PERFORMANCE; GRAPHS (CHARTS); ENERGY  
CONSUMPTION

Hamilton, W.  
General Research Corp.  
ADDRESS: Santa Barbara, CA 93105  
TITLE: Urban Applications and Energy Impacts of  
Future Electric Cars

Paper presented at the Fourth National Conference  
on the "Effects of Energy Constraints on  
Transportation Systems," held at Union  
College, Schenectady, New York, on August  
1-5, 1977, 22 p.

1977  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: URBAN TRANSPORTATION; FORECASTING;  
ELECTRIC VEHICLES; AIR POLLUTION; NOISE  
POLLUTION; ENERGY CONSUMPTION; PETROLEUM;  
LIFE-CYCLE COST; LOS ANGELES; PHILADELPHIA;  
SAINT LOUIS (MISSOURI)

Hack, R.M.; Chang, M.; Hase, M.; Carrubba, R.  
Engelhard Industries, a Division of Engelhard  
Minerals & Chemicals Corp.  
ADDRESS: Menlo Park, Edison, NJ 08817  
TITLE: Durability Testing at One Atmosphere of  
Advanced Catalysts and Catalyst Supports for  
Automotive Gas Turbine Engine Combustors.  
Part 1

Final Report, Report No. COMS/9446-1, NASA  
CR-135132, 223 p.

1977, June  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: TESTING; CATALYSTS; AUTOMOBILES; GAS  
TURBINE ENGINES; COMBUSTORS; PERFORMANCE;  
EMISSIONS; PROPANE; DIESEL FUELS; AUTOMOTIVE  
EMISSIONS; LIFE (DURABILITY); TABLES (DATA);  
GRAPHS (CHARTS)  
AVAILABILITY: NTIS

Hill, S.H.  
Teledyne Continental Motors, General Products  
Division  
ADDRESS: 76 Getty Street, Muskegon, MI 49442  
TITLE: Automotive Diesel Technology Program:  
Final Report, Period June 1975-April 1977

Report No. SAN/1099-1, 122 p.  
1977, August

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: AUTOMOBILES; DIESEL ENGINES;  
TECHNOLOGY; RESEARCH PROGRAMS; FUEL ECONOMY;  
DESIGN; AUTOMOTIVE EMISSIONS; SIMULATION;  
EXHAUST RECIRCULATION SYSTEMS  
AVAILABILITY: GPO

Hittman Associates Inc.  
ADDRESS: Columbia, MD 21045  
TITLE: Evaluation Methodology for Wear Tests  
Devices and Strategies to Reduce Highway  
Vehicle Use. Volume I: Technical Report.  
Volume II: Appendices

Report No. HIT-695, v.p.  
1977, August  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: HIGHWAY TRANSPORTATION; ENERGY  
CONSERVATION; EFFICIENCY; FUEL ECONOMY;  
FEASIBILITY; RETROFITTING; COMPARATIVE  
EVALUATIONS; TRUCKS; AUTOMOBILES; MARKET;  
PASSENGER TRANSPORTATION; CARGO  
TRANSPORTATION; BUSES (VEHICLES); MODELS;  
MOBILITY; ENVIRONMENTAL IMPACT; ECONOMICS;  
GRAPHS (CHARTS); EQUIPMENT; GOVERNMENT  
POLICIES; RETROFIT DEVICES

Ioward, E.B.; Barber, B.V.; Jordan, A.C.;  
Seaborn, C.C.  
Oak Ridge National Laboratory, Information  
Division, Information Center Complex, Energy  
Information Center  
ADDRESS: Oak Ridge, TN 37830  
TITLE: Transportation Energy Conservation Data  
Book: A Selected, Annotated Bibliography.  
Edition 2

Report No. ORNL/EIS-114 (Part II of ORNL-5320),  
272 p.  
1977, October  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: BIBLIOGRAPHIES; TRANSPORTATION; ENERGY  
CONSERVATION; AIR TRANSPORTATION; ALTERNATE  
FUELS; AUTOMOBILES; BUSES (VEHICLES); CARGO  
TRANSPORTATION; PETROLEUM; DEMAND  
(ECONOMICS); DIESEL ENGINES; ECONOMICS;  
EFFICIENCY; ELECTRIC VEHICLES; ENERGY  
CONSUMPTION; ENVIRONMENTAL IMPACT;  
FORECASTING; FUEL CONSUMPTION; FUEL ECONOMY;  
FUELS; GASOLINE; GOVERNMENT POLICIES;  
LEGISLATION; MASS TRANSPORTATION; RAIL  
TRANSPORTATION; STATISTICS; TRUCKS; URBAN  
TRANSPORTATION; HIGHWAY TRANSPORTATION;  
VEHICLES; WATER TRANSPORTATION; ABSTRACTS  
AVAILABILITY: NTIS

Jelavich, H.S.  
Faucett (Jack) Associates Inc.  
ADDRESS: 5454 Wisconsin Avenue, Suite 1150, Chevy  
Chase, MD 20015  
TITLE: A Study of the Determinants of Freight  
Modal Choice

Conference paper presented at Transportation  
Research Board Meeting Session Number 143,  
January 19, 1978, 21 p.  
1978  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: CARGO TRANSPORTATION; DECISIONS;  
WEIGHT; INPUT-OUTPUT ANALYSIS; COMMODITIES;  
FORECASTING; MODELS; RATES (COSTS); DISTANCE;  
DETERMINANTS

Keller, J.L.; Nakaguchi, G.H.; Ware, J.C.  
Union Oil Co. of California, Research Dept.  
ADDRESS: Brea, CA  
TITLE: Methanol Fuel Modification for Highway  
Vehicle Use. Final Report

Report No. HCF/V3683-18, v.p.  
1978, July  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: METHANOL; ALTERNATE FUELS; ALCOHOL  
FUELS; ENGINES; MODIFICATIONS; GASOLINE;  
PROPERTIES; VEHICLES; UTILIZATION;  
PERFORMANCE; ENVIRONMENTAL IMPACT;

TRANSPORTATION; WATER; TESTING; TABLES  
(DATA); TOXICITY; SAFETY  
AVAILABILITY: NTIS

Kirk, H.S.; Barber, K.F.  
Mueller Associates Inc.  
TITLE: A Pictorial Characterization of Worldwide  
Electric and Hybrid Vehicles

Report No. COMS-770373, presented during the  
March 1, 1977, conference on EPA's Electric  
and Hybrid Vehicle Demonstration Project, 264  
p.  
1977, August 16  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: PHOTOGRAPHS; ELECTRIC VEHICLES; HYBRID  
ELECTRIC-POWERED VEHICLES; GERMAN FEDERAL  
REPUBLIC; ISRAEL; NETHERLANDS; SWEDEN; UNITED  
KINGDOM; FRANCE; ITALY; JAPAN; USA;  
MANUFACTURERS; MARKET; RESEARCH; DESIGN;  
INTERNATIONAL ANALYSIS  
AVAILABILITY: GPO, Stock No. 060-000-00083-2

Leising, C.J.; Purohit, G.P.; DeGrey, S.P.;  
Pinegold, J.G.  
National Aeronautics and Space Administration,  
Jet Propulsion Laboratory  
ADDRESS: California Institute of Technology,  
Pasadena, CA  
TITLE: Utilization of Waste Heat in Trucks for  
Increased Fuel Economy. Final Report

Report No. HCF/H1011-02, 30 p.  
1978, June  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: WASTE HEAT; FUEL ECONOMY; UTILIZATION;  
TRUCKS; DIESEL ENGINES; SPARK IGNITION  
ENGINES; GAS TURBINE ENGINES; STIRLING  
ENGINES; RANKINE CYCLE ENGINES; REGENERATION;  
DRIVING CYCLE; ADIABATIC PROCESSES;  
RECUPERATION; TURBOCHARGING;  
TURBOCOMPOUNDING; GRAPHS (CHARTS); TABLES  
(DATA); DIAGRAMS  
AVAILABILITY: GPO, Stock No. 061-000-00111-5

Lindsey-Kaufman Co  
ADDRESS: 53 Hamilton Place, Tenafly, NJ 07670  
TITLE: Projection of Light Truck Population to  
Year 2025

Report No. ORNL/Sub-78/14285/1, Special, 64 p.  
1978, October  
SPONSOR: Oak Ridge National Laboratory, Energy  
Division, Regional and Urban Studies Section;  
U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: TRUCKS; INVENTORIES; FORECASTING;  
OWNERSHIP; GROWTH; HIGHWAY TRANSPORTATION;  
UTILIZATION; VEHICLE REGISTRATIONS;  
SOCIO-ECONOMIC FACTORS; VANS  
AVAILABILITY: NTIS

LNC Corp.  
ADDRESS: 476 Dunn Circle, Sparks, NV 89431  
TITLE: Evaluation of Selected Drive Components  
for a Flywheel Powered Computer Vehicle.  
Final Report. Phase I

Report No. SAN/1164-1, LNC-770401-B, v.p.  
1977, June 30  
SPONSOR: Energy Research and Development



Administration, San Francisco Operations  
Office: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: FLYWHEELS; ENERGY STORAGE; DIAGRAMS;  
GRAPHS (CHARTS); ELECTRIC VEHICLES; TESTING;  
MODELS; MOTORS; BEARINGS; SHAFTS; SEALS  
AVAILABILITY: NTIS

Marcus, A.  
Mechanical Technology Inc.  
ADDRESS: 964 Albany-Shaker Road, Latham, NY  
TITLE: An Advanced Electric Motor Transmission  
for Electric Vehicles: Development Plan.  
Technical Report

Report No. COO/2835-3, v.p.  
1977, November  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: TECHNOLOGY ASSESSMENT; EFFICIENCY;  
DESIGN; FABRICATION; ELECTRIC VEHICLES;  
MODELS; TABLES (DATA); TRANSPORTATION; GRAPHS  
(CHARTS); TESTING  
AVAILABILITY: NTIS

Marcus, A.; Pinkus, O.  
Mechanical Technology Inc.  
ADDRESS: Latham, NY  
TITLE: Characterization Study of an Electric  
Motor-Transmission System for Electric  
Vehicles: Technical Report

Report No. COO/2835-2, v.p.  
1977, September  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; PERFORMANCE; DESIGN;  
BATTERIES; TECHNOLOGY; TESTING;  
SPECIFICATIONS; ELECTRIC MOTORS; EFFICIENCY;  
AUTOMOTIVE ENGINEERING; COST ESTIMATES;  
GRAPHS (CHARTS); TABLES (DATA)  
AVAILABILITY: NTIS

Martini, W.P.  
Washington, University of, Joint Center for  
Graduate Study  
ADDRESS: 100 Sprout Rd., Richland, WA 99352  
TITLE: Stirling Engine Design Manual  
Final Report, Report No. DOE/NASA/3152-78/1, NASA  
CP-135382, 370 p.  
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

McLean, A.P.; Baker, R.R.  
Ford Motor Co.  
ADDRESS: Dearborn, MI 48121  
TITLE: Brittle Materials Design, High Temperature  
Gas Turbine. Volume 2: Ceramic Turbine  
Rotor Technology

Report No. AMHRC TR 78-18, DA-OD 8733, 12th  
Interim Report for the Period January -  
September 1977, 93 p.  
1978, March  
SPONSOR: U.S. Dept. of Defense, Army Materials  
and Mechanics Research Center; U.S. Dept. of

Energy, Division of Transportation Energy  
Conservation  
KEYWORDS: MATERIALS; DESIGN; GAS TURBINES;  
CERAMICS; MOTORS; TECHNOLOGY; HIGH  
TEMPERATURE; BRITTLENESS; FABRICATION;  
SILICON NITRIDES; TESTING; COMPUTER PROGRAMS;  
TABLES (DATA); GAS TURBINE ENGINES; SILICON  
CARBIDES; MECHANICAL PROPERTIES; PHOTOGRAPHS;  
DIAGRAMS  
AVAILABILITY: NTIS

Mechanical Technology Inc., R&D Division  
TITLE: Characterization Study of an Electric  
Motor-Transmission System for Electric  
Vehicles

Report No. HCP/M2835-01, v.p.  
1978, March  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; PERFORMANCE; DESIGN;  
AUTOMOBILE TRANSMISSIONS; TABLES (DATA);  
GRAPHS (CHARTS)  
AVAILABILITY: NTIS

Highdollar, P.; Hahn, W.F.  
Booz, Allen & Hamilton Inc., Design and  
Development Division  
ADDRESS: Cleveland, OH 44131  
TITLE: Preliminary Power Train Design for a  
State-of-the-Art Electric Vehicle

Report No. DOE/NASA/0595-78/1, NASA CP-13541, 140  
p.  
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: POWER TRAIN SYSTEMS; ELECTRIC VEHICLES;  
TECHNOLOGY ASSESSMENT; MOTORS; AUTOMOBILE  
TRANSMISSIONS; MODELS; DESIGN; COMPUTERIZED  
SIMULATION; DIAGRAMS; TABLES (DATA)  
AVAILABILITY: NTIS

Hittal, R.K. (ed.)  
Union College  
ADDRESS: Schenectady, NY 12308  
TITLE: Third National Conference on the Effects  
of Energy Constraints on Transportation  
Systems

Proceedings of a conference held at Union  
College, Schenectady, New York, August 2-6,  
1976, 408 p.  
1977, May  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: TRANSPORTATION SYSTEMS; ENERGY  
CONSUMPTION; ENERGY CONSERVATION; URBAN  
TRANSPORTATION; BAY AREA RAPID TRANSIT  
SYSTEM; CARGO TRANSPORTATION; RAIL  
TRANSPORTATION; PASSENGER TRANSPORTATION;  
REGULATIONS; CARPOOLING; TRUCKS; FUEL  
ECONOMY; INTERCITY TRANSPORTATION; RAPID  
TRANSIT SYSTEMS; AIR TRANSPORTATION; TABLES  
(DATA); CONFERENCES; COMPUTERIZED SIMULATION  
AVAILABILITY: GPO, Stock No. 060-000-00073-5

Hueller Associates Inc.  
ADDRESS: Baltimore, MD  
TITLE: Status of Alcohol Fuels Utilization



## Technology for Highway Transportation

Report No. HCP/H2923-01, 132 p.  
1978, June  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: ALTERNATE FUELS; UTILIZATION; ALCOHOL  
FUELS; HIGHWAY TRANSPORTATION; METHANOL;  
METHANOL; TESTING; ENGINES; EMISSIONS;  
PERFORMANCE; FUEL ECONOMY; FUEL CONSUMPTION;  
COMPARATIVE EVALUATIONS; PROPERTIES; COSTS;  
GRAPHS (CHARTS); WATER  
AVAILABILITY: NTIS

Queller Associates Inc.  
ADDRESS: Baltimore, MD  
TITLE: Denaturants for Ethanol/Gasoline Blends

Report No. HCP/H2098-01, 16 p.  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: ETHANOL; GASOLINE; ALTERNATE FUELS;  
DENATURANTS

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. HCP/H1011-01, v.p.  
1978, January  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; HYBRID  
ELECTRIC-POWERED VEHICLES; EQUIPMENT;  
TESTING; TABLES (DATA); BATTERIES; SURVEYS;  
PERFORMANCE; ELECTRIC VEHICLE RANGE; ENERGY  
CONSUMPTION; RELIABILITY  
AVAILABILITY: NTIS

National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH  
TITLE: Twelve State-of-the-Art Individual  
Electric and Hybrid Vehicle Test Reports.  
Volume I

Report No. HCP/H1011-03/1, v.p.  
1978, July  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; HYBRID  
ELECTRIC-POWERED VEHICLES; TESTING; DRIVING  
CYCLE; ENERGY CONSUMPTION; PERFORMANCE;  
DESIGN; BATTERIES; TABLES (DATA); GRAPHS  
(CHARTS); MANUFACTURE  
AVAILABILITY: NTIS

North Atlantic Treaty Organization, Committee on  
the Challenges of Modern Society  
TITLE: Proceedings of the Fourth International  
Symposium on Automotive Propulsion Systems.  
Volumes I and II

Report No. CONF-770830/1, symposium held in  
Washington, DC, April 18-22, 1977, 1038 p.  
1978, February  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: CONFERENCES; PROPULSION; AUTOMOBILES;  
GAS ENGINES; AUTOMOTIVE FUELS; FUELS; DIESEL  
ENGINES; STIRLING ENGINES; RANKINE CYCLE  
ENGINES; ELECTRIC VEHICLES; HYBRID

ELECTRIC-POWERED VEHICLES; STRATIFIED CHARGE  
ENGINES; SPARK IGNITION ENGINES; AUTOMOTIVE  
EMISSIONS; POWER TRAIN SYSTEMS  
AVAILABILITY: NTIS (when available)

Paul, F.W.; Negreanu, H.J.  
Carnegie-Mellon University, Mechanical  
Engineering Dept.  
ADDRESS: Pittsburgh, PA  
TITLE: Applied Studies in Advanced Boiler  
Technology for Rankine Cycle Power Systems

Report No. COO/2633-3, v.p.  
1978, February  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: BOILERS; RANKINE CYCLE POWER SYSTEMS;  
DESIGN; COMPARATIVE EVALUATIONS; TESTING;  
VAPOR GENERATORS; MODELS; SIMULATION; DIAGRAMS  
AVAILABILITY: NTIS

Pefley, R.K.; Browning, L.H.; McCormack, H.C.;  
Hornberger, M.L.; Likos, W.F.; Pullman, B.  
Santa Clara University, Dept. of Mechanical  
Engineering  
ADDRESS: Santa Clara, CA 95053  
TITLE: Characterization and Research  
Investigation of Methanol and Methyl Fuels

Report No. COO-1258-1, N.E. 77-1, 108 p.  
1977, August  
SPONSOR: U.S. Environmental Protection Agency,  
Motor Vehicle Emission Laboratory; Energy  
Research and Development Administration,  
Division of Transportation Energy Conservation  
KEYWORDS: ALTERNATE FUELS; METHANOL; COMPARATIVE  
EVALUATIONS; EMISSIONS; EFFICIENCY; FUEL  
ECONOMY; GASOLINE; PERFORMANCE; COMPUTERIZED  
SIMULATION; GRAPHS (CHARTS); TABLES (DATA);  
TESTING  
AVAILABILITY: NTIS

Phoebe, C.H.  
Gulf Research and Development Co.  
ADDRESS: Pittsburgh, PA 15230  
TITLE: Passenger Car Fuel Economy in Short Trip  
Operation. Technical Progress Report for  
Period May 1, 1977 - November 30, 1977

Report No. COO/4248-1, 23 p.  
1977, November  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: FUEL ECONOMY; GASOLINE; HYDROGEN;  
METHANOL; FUEL INJECTION SYSTEMS; STIRLING  
ENGINES; GAS ENGINES; AUTOMOBILES;  
COMPARATIVE EVALUATIONS; DRIVING CYCLE;  
HIGHWAY TRANSPORTATION; ENERGY STORAGE;  
VEHICLE TRIPS; TESTING; FUEL CONSUMPTION;  
VEHICLE MILES TRAVELED; PHOTOGRAPHS;  
AUTOMOBILE OCCUPANCY  
AVAILABILITY: NTIS

Pouliot, H.W.; Robinson, C.W.; Delameter, W.R.  
Sandia Laboratories  
ADDRESS: Livermore, CA  
TITLE: A Variable-Displacement Spark-Ignition  
Engine

Final Report, Report No. SAND 77-8299, 108 p.  
1978, June  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: SPARK IGNITION ENGINES; VARIABLE

DISPLACEMENT ENGINES; EXHAUST RECIRCULATION  
SYSTEMS; AUTOMOTIVE EMISSIONS; FUEL ECONOMY;  
MEASUREMENTS; TESTING; DRIVING CYCLE; URBAN  
TRANSPORTATION; MECHANICS; GRAPHS (CHARTS);  
DIAGRAMS; HYDROCARBONS; NITROGEN OXIDES  
AVAILABILITY: GPO, Stock No. 061-000-00108-5

Purdue University, Institute for  
Interdisciplinary Engineering Studies  
ADDRESS: West Lafayette, IN  
TITLE: Opportunity and Risk Assessment of the  
Electric and Hybrid Vehicle Research,  
Development and Demonstration Act of 1976

Report No. HCP/M4250-01 (Previously issued as  
COO-4250-1), 327 p.

1978, January  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; HYBRID  
ELECTRIC-POWERED VEHICLES; COMMERIALIZATION;  
FUELING DEMAND; COSTS; PERFORMANCE; TABLES  
(DATA); ELECTRIC VEHICLE RANGE;  
TRANSPORTATION; PETROLEUM; ENERGY  
CONSERVATION; TECHNOLOGY ASSESSMENT;  
INSTITUTIONAL FACTORS; SAFETY  
AVAILABILITY: NTIS

Reilly, J.J.; Wiswall, R.H.; Waide, 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, 88 p.  
1978, October

SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: HYDROGEN; HYDROGEN STORAGE; HYDRIDES;  
AUTOMOBILES; MAGNESIUM HYDRIDES; ALUMINUM  
HYDRIDES; DESIGN; STABILITY; COMPARATIVE  
EVALUATIONS; TABLES (DATA); DIAGRAMS;  
ALTERNATE FUELS  
AVAILABILITY: NTIS

Roelke, R.J.; McLellan, K.L.  
National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135  
TITLE: Cold-Air Performance of the  
Compressor-Drive Turbine of the Department of  
Energy Baseline Automobile Gas-Turbine Engine

Report No. DOE/NASA/1011-78/25, NASA TM-78894,  
P-9480, 22 p.

1978, July  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: GAS TURBINE ENGINES; PERFORMANCE; US  
DOE; AUTOMOBILES; AERODYNAMICS; VELOCITY;  
TESTING; ENGINES; EFFICIENCY; EQUIPMENT;  
MEASUREMENT; PRESSURE MEASUREMENT; GRAPHS  
(CHARTS); DIAGRAMS; TEMPERATURE; TORQUE  
AVAILABILITY: NTIS

Rowe, E.A.; Wachman, J.P.; Duffy, T.E.  
International Harvester Co., Solar Division  
ADDRESS: 2200 Pacific Highway, San Diego, CA  
92138  
TITLE: Automotive Storage of Hydrogen Using  
Modified Magnesium Hydrides

Report No. TEC-75/002, 55 p.

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; HYDRIDES;  
REFUELING; TABLES (DATA); GRAPHS (CHARTS);  
HYDROGEN STORAGE  
AVAILABILITY: NTIS

Rosenberg, W.; Bufferd, A.; Coonley, P.;  
Hamilton, W.; Kaiser, P.; Weber, P.T.  
U.S. Dept. of Transportation, Transportation  
Systems Center  
ADDRESS: Kendall Square, Cambridge, MA 02142  
TITLE: Institutional Factors in Transportation  
Systems and Their Potential for Bias Toward  
Vehicles of Particular Characteristics

Report No. HCP/M1043-01, CONS/1043-1, 428 p.  
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; AUTOMOTIVE  
INDUSTRY; ELECTRIC POWER; BATTERY CHARGING;  
VEHICLE PARKING; TABLES (DATA); REGIONAL  
ANALYSIS; PRICES; RATES (COSTS); PETROLEUM;  
URBAN AREAS  
AVAILABILITY: NTIS

Ross, J.A.; Wooldridge, G.A.  
Rohr Industries Inc., Advanced Transportation  
Systems  
ADDRESS: Chula Vista, CA 92010  
TITLE: Preliminary Power Train Design for a  
State-of-the-Art Electric Vehicle

Report No. DOE/NASA/0592-78/1, NASA CR-135380,  
RHR-78-035, 222 p.

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: NTIS

Rowlett, B.H.; Murry, R.  
Airesearch Manufacturing Co.  
ADDRESS: Torrance, CA  
TITLE: Near-Term Electric Vehicle Program: Phase  
I, Final Report

Report No. SAN/1213-1, 259 p.  
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: NTIS

Rascitto, D.; McCorsick, J.; Gray, S.  
Mechanical Technology Inc.  
ADDRESS: Latham, NY 12110  
TITLE: Hydrodynamic Air Lubricated Compliant  
Surface Bearing for an Automotive Gas Turbine  
Engine. I - Journal Bearing Performance

Report No. COFS/9427-1, NASA-CN-135368, 148 p.  
1978, April  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation; National  
Aeronautics and Space Administration  
KEYWORDS: TESTING; AUTOMOTIVE ENGINES; GAS  
TURBINE ENGINES; BEARINGS; DESIGN;  
PERFORMANCE; TEMPERATURE  
AVAILABILITY: NTIS

Schmitt, F.W.; Wagner, C.E.  
Chrysler Corp.  
ADDRESS: Detroit, MI  
TITLE: Baseline Gas Turbine Development Program.  
Eighteenth Quarterly Progress Report

Report No. COO-2749-18, 261 p.  
1977, April 30  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: GAS TURBINE ENGINES; DESIGN;  
EFFICIENCY; FUEL ECONOMY; GRAPHS (CHARTS);  
TABLES (DATA); DIAGRAMS; VEHICLES;  
PERFORMANCE; DEVELOPMENT  
AVAILABILITY: NTIS

Schwartz, M.J.  
National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135  
TITLE: New Batteries and Their Impact on Electric  
Vehicles

Report No. EPDA/NASA 1011/77/3, NASA TM X-7362,  
paper presented at the International Electric  
Vehicle Exposition, held in Chicago,  
Illinois, April 26-29, 1977, v.p.  
1977

SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; ELECTRIC VEHICLE  
RANGE; COSTS; BATTERIES; PERFORMANCE;  
COMPARATIVE EVALUATIONS

Schwartz, R.  
ASL Engineering Inc.  
ADDRESS: 405 South Fairview Avenue, Goleta, CA  
93017  
TITLE: Near-Term Electric Vehicle Program.  
Phase 1, Final Report

Report No. SAN/1295-1, 304 p.  
1977, August  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; DESIGN; BATTERIES;  
PERFORMANCE; TABLES (DATA); GRAPHS (CHARTS);  
DIAGRAMS; LIFE-CYCLE COST; COSTS; EFFICIENCY;  
WRECK STORAGE; URBAN TRANSPORTATION; ENERGY  
CONSUMPTION; ENERGY CONSERVATION; WEIGHT  
AVAILABILITY: NTIS

Shonka, D.B.  
Oak Ridge National Laboratory, Energy Division,

Regional and Urban Studies Section  
ADDRESS: Oak Ridge, TN 37830  
TITLE: Characteristics of Automotive Fleets in  
the United States: 1966-1977

Report No. ORNL/TM-6449 Special, 49 p.  
1978, September  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: AUTOMOTIVE FLEETS; AUTOMOBILES;  
INVENTORIES; PURCHASING; FUEL ECONOMY;  
OWNERSHIP; SURVEYS; TABLES (DATA); SIZE;  
VEHICLE REGISTRATIONS; VEHICLE MILES  
TRAVELED; CHARACTERISTICS  
AVAILABILITY: NTIS

Shonka, D.B.; Loebl, A.S.; Patterson, P.D.;  
O'Connor, T.P.; Ogle, M.C.; Rose, A.B.;  
Greene, 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

Report No. ORNL-5320, 459 p.  
1977, October  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: ENERGY CONSERVATION; HIGHWAY  
TRANSPORTATION; AIR TRANSPORTATION; RAIL  
TRANSPORTATION; MARINE TRANSPORTATION;  
PIPELINE TRANSPORTATION; STATISTICS; TABLES  
(DATA); GRAPHS (CHARTS); VEHICLES;  
REGULATIONS; ENERGY CONSUMPTION; DEMAND  
(ECONOMICS); FUEL ECONOMY; FUEL CONSUMPTION;  
AUTOMOBILES; ENERGY INTENSITY; TRAVEL; ENERGY  
DEMAND; PASSENGER TRANSPORTATION; AUTOMOTIVE  
FLEETS; PETROLEUM; SALES; PUBLIC  
TRANSPORTATION; URBAN TRANSPORTATION; VEHICLE  
REGISTRATIONS; VEHICLE MILES TRAVELED;  
FORECASTING; GOVERNMENT POLICIES; ENERGY  
SUPPLIES; WATER TRANSPORTATION  
AVAILABILITY: NTIS

Soltis, R.F.  
National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135  
TITLE: A Cycle Titer for Testing Electric Vehicles

Report No. DOE/NASA/1011-78/27, NASA TM-7893a,  
X-9677, Technical Paper presented at the  
Fifth International Electric Vehicle  
Symposium sponsored by the Electric Vehicle  
Council, Philadelphia, PA, October 2-5, 1978,  
5 p.  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; TESTING; DRIVING  
CYCLE; VELOCITY; EQUIPMENT  
AVAILABILITY: NTIS

Soltis, R.F.; Borek, J.M.; Denington, R.J.;  
Dustin, R.O.  
National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135  
TITLE: Baseline Tests of the Kordesch Hybrid  
Passenger Vehicle

Report No. NASA TM-73769, COE/1011-14, 68 p.  
1978, 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 ENGINES; PERFORMANCE; DIAGRAMS;  
GRAPHS (CHARTS); ENERGY CONSUMPTION  
AVAILABILITY: NTIS

Soltis, R.P.; Dustin, H.O.; Sargent, W.B.  
National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135  
TITLE: Results of Baseline Tests of the Lucas  
Limousine

Report No. NASA TM X-73609, 27 p.  
1977, January  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; TESTING; DRIVE TRAIN  
SYSTEMS; BATTERIES; PASSENGER TRANSPORTATION;  
DRIVING CYCLE; PERFORMANCE; MILEAGE; ENERGY  
CONSUMPTION; STANDARDS; PHOTOGRAPHS; GRAPHS  
(CHARTS); ELECTRIC VEHICLE RANGE  
AVAILABILITY: NTIS

Southwest Research Institute; Cameron Engineers;  
Standard Oil Co. of Ohio; SOHIO Petroleum Co.  
ADDRESS: SPI, San Antonio, TX; CE, Denver, CO;  
SOHIO, Grand Junction, CO  
TITLE: Identification of Probable Automotive  
Fuels Composition: 1985-2000 and Executive  
Summary

Report No. HCP/W3688-01/1, 218 p.; Report No.  
HCP/W3688-01/2 for Executive Summary, 55 p.  
1978, May  
SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: ALTERNATE FUELS; RAW MATERIALS;  
AUTOMOTIVE FUELS; DIESEL FUELS; MARKET;  
TRANSPORTATION; ENERGY FLOW; TABLES (DATA);  
FORECASTING; ENERGY DEMAND; SYNTHETIC  
PETROLEUM; REFINING; PROPERTIES; OIL SHALE;  
ALCOHOL FUELS; AUTOMOBILES; METHANOL; COAL;  
PRODUCTION; HYDROCARBONS; INTERNAL COMBUSTION  
ENGINES; OCTANE; GASOLINE

Tacina, R.  
National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135  
TITLE: Experimental Evaluation of  
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SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
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KEYWORDS: FUEL INJECTION SYSTEMS; ATOMIZATION;  
EVAPORATION; DIAGRAMS; GRAPHS (CHARTS); GAS  
TURBINES; CATALYSTS; COMBUSTORS; AUTOMOBILES  
AVAILABILITY: NTIS

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Lewis Research Center  
ADDRESS: Cleveland, OH 44135  
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SPONSOR: U.S. Dept. of Energy, Division of  
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KEYWORDS: STIRLING ENGINES; MODELS; PERFORMANCE;  
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AVAILABILITY: GPO, Stock No. 757-139/1201

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ADDRESS: 101 First Avenue, Waltham, MA 02154  
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FUEL ECONOMY; TRUCKS; DESIGN; GRAPHS  
(CHARTS); DIAGRAMS; AUTOMOTIVE EMISSIONS;  
FEASIBILITY; TESTING; WASTE HEAT; RECOVERY;  
UTILIZATION; DEMONSTRATION  
AVAILABILITY: NTIS

Tovle, W.L.; Graess, J.E.A.; Chilenskas, A.A.;  
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Argonne National Laboratory  
ADDRESS: 9700 South Cass Ave., Argonne, IL 60439  
TITLE: Cost Estimate for the Commercial  
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Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: COSTS; LITHIUM/METAL SULFIDE BATTERIES;  
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LITHIUM-ALUMINUM/METAL SULFIDE BATTERIES;  
PRICES; ECONOMICS; DIAGRAMS  
AVAILABILITY: NTIS

U.S. Dept. of Energy, Nevada Operations Office  
ADDRESS: Las Vegas, NV  
TITLE: Driver Aid and Education Test Project.  
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KEYWORDS: AUTOMOBILE DRIVERS; EDUCATION;  
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TRUCKS; TESTING; MEASURING INSTRUMENTS;  
DRIVING CYCLE; FEEDBACK; TABLES (DATA);  
GRAPHS (CHARTS); MONTHLY VARIATIONS  
AVAILABILITY: NTIS

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Energy Conservation

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STANDARDS; RESEARCH; QUESTIONNAIRES; SURVEYS;  
TABLES (DATA); GRAPHS (CHARTS)

Union College, Graduate Studies and Continuing  
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ADDRESS: Schenectady, NY 12308

TITLE: Fourth National Conference on the "Effects  
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1-5, 1977, v.p.

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KEYWORDS: TRANSPORTATION; CONFERENCES; ENERGY  
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TRANSPORTATION; PASSENGER TRANSPORTATION;  
CARGO TRANSPORTATION; AIR TRANSPORTATION;  
CAPACITY TRANSPORTATION; RAIL  
TRANSPORTATION; GOVERNMENT POLICIES; ELECTRIC

VEHICLES; RESEARCH; ENERGY CONSUMPTION

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Brookhaven National Laboratory, National Center  
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ADDRESS: Upton, NY

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MARKET; VEHICLE REGISTRATIONS; AUTOMOBILES;  
HYBRID ELECTRIC-POWERED VEHICLES; PURCHASING;  
WEIGHT; EQUIPMENT; TRUCKS; HIGHWAY  
TRANSPORTATION; PASSENGER TRANSPORTATION;  
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Abbott, R.K.; Kirsten, F.A.; Mullen, D.R.;  
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Lawrence Berkeley Laboratory  
ADDRESS: University of California, One Cyclotron  
Bld., Berkeley, CA 94720  
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PROCESSING; TRANSDUCERS; IMPACT SHOCK;  
MECHANICAL VIBRATIONS  
AVAILABILITY: NTIS

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Abt Associates Inc.  
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CONSUMPTION; GASOLINE; ATTITUDES;  
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AVAILABILITY: NTIS

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Economics Research Branch  
ADDRESS: Philadelphia, PA 19104  
TITLE: Demand Elasticities for Gasoline: Another  
View

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KEYWORDS: ELASTICITY (ECONOMICS); GASOLINE;  
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COSTS; REGIONAL PLANNING; ABSTRACTS; PERSONAL  
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CARGO TRANSPORTATION; TRANSPORTATION SYSTEMS  
AVAILABILITY: NTIS

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ADDRESS: 5285 Port Royal Road, Springfield, VA  
22161  
TITLE: Tourism and Vacation Travel: State and  
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KEYWORDS: TRAVEL; ECONOMIC IMPACT; SOCIO-ECONOMIC  
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AVAILABILITY: NTIS

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TITLE: Bus Transportation. Part 1. National and  
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SCHEDULING; COSTS; SUBSIDIES; ENGINEERING;  
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(COSTS); FORECASTING; SIMULATION; ABSTRACTS  
AVAILABILITY: NTIS

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ADDRESS: El Segundo, CA  
TITLE: Mode Shift Strategies to Effect Energy  
Savings in Intercity Transportation

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FORECASTING; AIR TRANSPORTATION; RAIL  
TRANSPORTATION; BUSES (VEHICLES);  
AUTOMOBILES; RATES (COSTS); SOCIO-ECONOMIC  
FACTORS; FUEL CONSUMPTION; TRAVEL; TABLES  
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COMPARATIVE EVALUATIONS; THERMAL EFFICIENCY;  
TABLES (DATA); GRAPHS (CHARTS); ENGINES;  
AUTOMOBILES; AUTOMOTIVE FUELS; HYDROGEN  
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Agnew, W.G.  
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ADDRESS: Warren, MI 48090  
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STRATIFIED CHARGE ENGINES; ELECTRIC VEHICLES;  
GAS TURBINE ENGINES; METHANOL; HYDROGEN; FUEL  
CELLS; ALTERNATE FUELS; BATTERIES; ALCOHOLS;  
FEASIBILITY; OTTO CYCLE; BRAYTON CYCLE;  
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ADDRESS: 1709 New York Ave. NW, Washington, DC  
20006  
TITLE: Airline Financial Performance 1976-1977:  
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Box 117, Oak Ridge, TN 37830  
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KEYWORDS: BIBLIOGRAPHIES; TRANSPORTATION;  
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AVAILABILITY: NTIS



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GRAPHS (CHARTS); PHOTOGRAPHS; TABLES (DATA)  
AVAILABILITY: NTIS

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ADDRESS: Wolfsburg, Germany  
TITLE: A Comparison Between the Primary Energy  
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AVAILABILITY: Society of Automotive Engineers  
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TITLE: Report from the American Bus Association.  
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KEYWORDS: BUSES (VEHICLES); GRAPHS (CHARTS);

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22209  
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KEYWORDS: METHANOL; ALTERNATE FUELS; UTILIZATION;  
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IL 60525  
TITLE: Proceedings of the 12th Intersociety  
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ENERGY CONSERVATION; EQUIPMENT; ENVIRONMENTAL  
IMPACT; INDUSTRIAL SECTOR; UNCONVENTIONAL  
ENERGY SOURCES; MAGNETOHYDRODYNAMICS; RANKINE  
CYCLE ENGINES; STIRLING ENGINES; THERMIONICS;  
ENERGY CONVERSION; DESIGN; WASTE HEAT;  
INDUSTRIES; ELECTRIC POWER; SOLAR COLLECTORS;  
SOLAR ENERGY; PHOTOVOLTAIC CELLS;  
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TITLE: Monthly Truck Tonnage Report

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KEYWORDS: TRUCKS; CARGO TRANSPORTATION; TABLES  
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TITLE: Weekly Truck Tonnage Report

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KEYWORDS: TRUCKS; CARGO TRANSPORTATION; TABLES  
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ADDRESS: 1616 P Street NW, Washington, DC 20036  
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KEYWORDS: STATISTICS; TRUCKS; REVENUE; EXPENSES;  
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ECONOMICS; INTERCITY TRANSPORTATION; CARGO  
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SPONSOR: U.S. Dept. of Transportation, Urban Mass  
Transportation Administration  
KEYWORDS: URBAN TRANSPORTATION; MASS  
TRANSPORTATION; ACCOUNTING; FINANCIAL DATA;  
OPERATING COSTS; DATA ACQUISITION; FORMS  
(PAPER); MAINTENANCE; ACCIDENTS  
AVAILABILITY: NTIS

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Andersen, C.J.  
Lawrence Livermore Laboratory  
ADDRESS: Livermore, CA 94550  
TITLE: Alternative Fuels for Transportation:  
Implications of the Broad-Cut Option

Report No. UCRL-52313, 18 p.

1977, July 11

SPONSOR: Energy Research and Development  
Administration  
KEYWORDS: GASOLINE; DIESEL FUELS; BROAD-CUT  
FUELS; ENERGY CONSERVATION; EFFICIENCY;  
ENGINES; PRODUCTION; PETROLEUM; COAL;  
SYNTHETIC FUELS; GOVERNMENT POLICIES; OIL  
SHALE; GRAPHS (CHARTS); TABLES (DATA);  
PETROLEUM REFINING  
AVAILABILITY: NTIS

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Anderson, D.W.  
National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135  
TITLE: Performance and Emissions of a Catalytic  
Reactor with Propane, Diesel, and Jet A Fuels

Report No. NASA TR-73786, CONS/1011-20, paper  
presented at the Fall meeting, Western States  
Section of the Combustion Institute,  
Stanford, California, October 17-18, 1977,  
v.p.

1977, September

SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: PROPANE; DIESEL FUELS; JET ENGINE  
FUELS; PERFORMANCE; COMBUSTION; NITROGEN  
OXIDES; EFFICIENCY; EMISSIONS; COMPARATIVE  
EVALUATIONS; CATALYSTS; HIGHWAY  
TRANSPORTATION; AUTOMOTIVE EMISSIONS; GRAPHS  
(CHARTS)  
AVAILABILITY: NTIS

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American Gas Association, Policy and Economic  
Analysis Division  
ADDRESS: 1515 Wilson Boulevard, Arlington, VA  
22209  
TITLE: President's Proposed Energy Tax Measures  
Costly for Consumers

American Gas Association Monthly, 59(11), 8-10  
1977

KEYWORDS: NATIONAL ENERGY PLAN; TAXES; CONSUMERS;  
GASOLINE; AUTOMOBILES; FUEL ECONOMY;  
PETROLEUM; UTILIZATION; GROSS NATIONAL  
PRODUCT; FORECASTING; MODELS; ECONOMETRIC  
ANALYSIS

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Andrews, P.D.; Langdon, H.G.  
Transport and Road Research Laboratory, Dept. of  
the Environment  
ADDRESS: Crowthorne, Berkshire, United Kingdom  
TITLE: An Individual Cost Minimising Method of  
Determining Modal Split Between Three Travel  
Modes

TRL Laboratory Report 698, 43 p.

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KEYWORDS: MATHEMATICAL MODELS; TRAVEL; COSTS;  
URBAN TRANSPORTATION; AUTOMOBILES; BUSES

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(VEHICLES); RAPID TRANSIT SYSTEMS; ECONOMICS;  
PUBLIC TRANSPORTATION; COMPARATIVE  
EVALUATIONS; BEHAVIOR; TABLES (DATA); GRAPHS  
(CHARTS)

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Ingell, P.R.; Golec, T.  
Chrysler Corp.  
ADDRESS: Detroit, MI  
TITLE: Upgrading Automotive Gas Turbine  
Technology. An Experimental Evaluation of  
Improvement Concepts

Paper No. 760280, presented at the Society of  
Automotive Engineers Congress and Exposition,  
Detroit, Michigan, February 23-27, 1976, 50 p.  
1976

SPONSOR: Society of Automotive Engineers  
KEYWORDS: GAS TURBINES; AUTOMOBILES; GAS TURBINE  
ENGINES; DIAGRAMS; GRAPHS (CHARTS);  
PERFORMANCE; TESTING; AUTOMOTIVE EMISSION  
CONTROL; FUEL ECONOMY; PHOTOGRAPHS  
AVAILABILITY: Society of Automotive Engineers,  
400 Commonwealth Drive, Warrendale, PA 15096

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Argonne National Laboratory  
ADDRESS: 9700 South Cass Avenue, Argonne, IL  
60439

TITLE: Development of Lithium/Metal Sulfide  
Batteries at Argonne National Laboratory:  
Summary Report for 1976

Report No. ANL-77-18, 38 p.

1977, March

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

KEYWORDS: LITHIUM/METAL SULFIDE BATTERIES; ENERGY  
STORAGE; MATERIALS; ELECTRODES; ELECTRIC  
UTILITIES; ELECTRIC VEHICLES;  
LITHIUM-ALUMINUM/METAL SULFIDE BATTERIES;  
DIAGRAMS

AVAILABILITY: NTIS

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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 Progress Reports, v.p.

Quarterly

SPONSOR: Energy Research and Development  
Administration; U.S. Dept. of Energy

KEYWORDS: ENERGY STORAGE; ELECTRIC VEHICLES;  
BATTERIES; PERFORMANCE; COMMERCIALIZATION;  
TESTING; MATERIALS; UTILIZATION

AVAILABILITY: NTIS

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Division; Federal Energy Administration,  
Office of Macroeconomic Impact Analysis  
ADDRESS: Washington, DC  
TITLE: Econometric Dimensions of Energy Demand  
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127 p.  
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KEYWORDS: ENERGY DEMAND; ENERGY SUPPLIES;  
ECONOMETRIC ANALYSIS; ENERGY POLICY;  
GASOLINE; FOSIL FUELS; ELECTRIC UTILITIES;  
FORECASTING; PRICES; MODELS; SIMULATION;  
TABLES (DATA); INDUSTRIES; AUTOMOBILES;  
SALES; IMPORTS; INDUSTRIAL SECTOR; FUEL  
CONSUMPTION; ELECTRIC POWER DEMAND;  
RESIDENTIAL SECTOR  
AVAILABILITY: Lexington Books, D.C. Heath and  
Co., Lexington, MA \$13.00

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Asselman, G.A.A.; Spigt, C.L.; Heijer, R.J.  
Phillips Research Laboratories  
ADDRESS: Holland  
TITLE: Design Considerations on a Thermal Energy  
Storage Stirling Engine Automobile

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Exposition, Cobo Hall, Detroit, Michigan,  
February 28-March 4, 1977, 16 p.

1977

SPONSOR: Society of Automotive Engineers

KEYWORDS: STIRLING ENGINES; THERMAL ENERGY  
STORAGE EQUIPMENT; DESIGN; GRAPHS (CHARTS);  
DIAGRAMS; PERFORMANCE; SALTS; HEAT PIPES;  
FLUORIDES

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

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Association of American Pipe Lines  
ADDRESS: 1725 K Street NW, Washington, DC 20006  
TITLE: Shifts in Petroleum Transportation: 1976

Annual report, 9 p.

1978, June 19

KEYWORDS: PETROLEUM; PIPELINE TRANSPORTATION;  
PETROLEUM PRODUCTS; HISTORY; WATER  
TRANSPORTATION; TRUCKS; RAIL TRANSPORTATION;  
TOWNSHIP; STATISTICS; TABLES (DATA)

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Association of American Railroads, Economics and  
Finance Dept.  
ADDRESS: 1920 L Street NW, Washington, DC 20036  
TITLE: Yearbook of Railroad Facts: 1978 Edition

Annual Report, 65 p.

1978

KEYWORDS: RAILROADS; ENERGY DEMAND; STATISTICS;  
RAIL TRANSPORTATION; PASSENGER  
TRANSPORTATION; CARGO TRANSPORTATION;  
REVENUE; FINANCIAL DATA; CAPITAL COSTS;  
EMPLOYMENT; INCOME; FUEL CONSUMPTION; TABLES  
(DATA); EQUIPMENT; HISTORY; TOWNSHIP; MILEAGE;  
MAINTENANCE

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Association of American Railroads, Economics and  
Finance Dept.  
ADDRESS: Washington, DC 20036  
TITLE: Indexes of Railroad Material Prices and  
Wage Rates: Railroads of Class 1

Quarterly publication, Series QNPW, 4 p.

KEYWORDS: RAIL TRANSPORTATION; PRICES; MATERIALS;  
WAGES; INDEXES (RATIOS); FUELS; REGIONAL  
ANALYSIS; TABLES (DATA)

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Association of American Railroads, Economics and  
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ADDRESS: Washington, DC 20036

TITLE: Railroads and Their Operated Mileage in  
the Several States As of December 31, 1974

62 p.

1975, December

KEYWORDS: RAILROADS; MILEAGE; REGIONAL ANALYSIS;  
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Association of American Railroads, Office of  
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TITLE: Background Material for States

50 p.

1976, May

KEYWORDS: RAILROADS; REGIONAL ANALYSIS; CARGO  
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COMMODITIES; MILEAGE; STATE ANALYSIS

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ADDRESS: Washington, DC

TITLE: New Automotive Power Systems

Report No. TID-26753, 17 p. for Vol. I;

TID-26754, 65 p. for Vol. II; TID-26755, 37  
p. for Vol. III

1974, November 11

KEYWORDS: AUTOMOBILES; RESEARCH; FUEL ECONOMY;  
AUTOMOTIVE ENGINES; ELECTRIC VEHICLES; US  
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AVAILABILITY: NTIS

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Avriel, H.

Stanford University, Dept. of Operations  
Research, Systems Optimization Laboratory

ADDRESS: Stanford, CA

TITLE: Modeling Personal Consumption of Goods in  
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Technical Report SOL 76-17, 31 p.

1976, August

SPONSOR: Energy Research and Development  
Administration; Electric Power Research  
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KEYWORDS: ENERGY MODELS; INCOME; EXPENDITURES;  
NATURAL GAS; COAL; PETROLEUM; ELECTRIC POWER  
DEMAND; AGRICULTURE; FOOD; WHOLESALE TRADE;  
RETAIL TRADE; LUBRICANTS; APPLIANCES;  
CONSTRUCTION; MACHINERY; GRAPHS (CHARTS);  
TRANSPORTATION

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Ayres, R. U.; Noble, S.

International Research and Technology Corp.

ADDRESS: Suite 600, 1225 Connecticut Avenue NW,

Washington, DC

TITLE: Economic Impact of Mass Production of  
Alternative Low Emissions Automotive Power  
Systems and Appendices

Report No. DOT-OS-20003 (Amended), IRT-287-R, V. P.  
1973, March 6

SPONSOR: U.S. Dept. of Transportation  
KEYWORDS: ECONOMIC ANALYSIS; AUTOMOTIVE

EMISSIONS; AUTOMOBILES; COSTS; AUTOMOTIVE  
INDUSTRY; EMPLOYMENT; FUEL CONSUMPTION;  
AUTOMOTIVE ENGINES; COMPARATIVE EVALUATIONS;  
PRICES; DRIVING CYCLE; EMPLOYMENT; OWNERSHIP;  
PETROLEUM INDUSTRY; MANUFACTURING; TABLES  
(DATA); MODELS; DESIGN; POLLUTION REGULATIONS  
AVAILABILITY: NTIS

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Bader, C.; Plunt, H.-G.

Kanner (Leo) Associates

ADDRESS: Redwood City, CA 94063

TITLE: Electric Propulsion for Road Vehicles.  
State of the Art and Problems

Report No. N76-14379, NASA TT F-16819, 27 p.;

translated from Elektrotechnische

Zeitschrift Ausg. A, 94 (11), 637-645

1975, December

KEYWORDS: ELECTRIC VEHICLES; BATTERIES; HYBRID  
ELECTRIC-POWERED VEHICLES; PROPULSION; COSTS  
AVAILABILITY: NTIS

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Bader, C.; Stephan, W.

Deutsche Automobilgesellschaft

Forschungslaboratorium

ADDRESS: Germany

TITLE: Electric Vehicles in Germany - Present and  
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February 27 - March 3, 1978, 12 p.

1978

KEYWORDS: ELECTRIC VEHICLES; GERMAN FEDERAL  
REPUBLIC; ENERGY STORAGE; DRIVE TRAIN  
SYSTEMS; PRICES; MAINTENANCE; HYBRID  
ELECTRIC-POWERED VEHICLES; PHOTOGRAPHS;  
DIAGRAMS

AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
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Balasubramanian, M.; Jenkins, R.

TRW Inc., Energy Systems Planning Division

ADDRESS: McLean, VA 22101

TITLE: Automotive Fuel Requirements with  
Increasing Diesel Car Population and  
Implications to Refining Operations

Report No. PA 3885-22-1, v.p.

1978, January

SPONSOR: U.S. Dept. of Energy, Office of Policy  
and Evaluation

KEYWORDS: DIESEL ENGINES; AUTOMOTIVE FUELS;  
PETROLEUM REFINERIES; FORECASTING; GASOLINE;  
DIESEL FUELS; GRAPHS (CHARTS); PETROLEUM  
REFINING; DISTILLATES; SUPPLY (ECONOMICS);  
DEMAND (ECONOMICS)

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Balkus, K.

Florida State University

ADDRESS: Tallahassee, FL 32306

TITLE: Transportation Issues in Consumer  
Motivation

Paper presented at the 52nd Annual Meeting of the  
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Research Record No. 439, 1-9

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SPONSOR: National Academy of Sciences, National Research Council, Highway Research Board  
 KEYWORDS: CONSUMERS; TRANSPORTATION; ATTITUDES; HELP; METHOD; TABLES (DATA); QUESTIONNAIRES; MASS TRANSPORTATION  
 AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418 \$2.00 for Highway Research Record No. 439

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Banowetz, W.A.; Bantz, L.J.  
 Automobile Club of Southern California  
 ADDRESS: 2601 South Figueroa Street, Los Angeles, CA 90007  
 TITLE: Field Evaluation of Miles-Per-Gallon Meters

Report No. PB-276646, DOT-TSC-OST-77-64, v.p.  
 1977, November

SPONSOR: U.S. Dept. of Transportation, Transportation Systems Center  
 KEYWORDS: FUEL ECONOMY; FEEDBACK; MILEAGE; AUTOMOBILES; COMMUTING; TESTING; DRIVING CYCLE; COMPARATIVE EVALUATIONS; MEASURING INSTRUMENTS; AUTOMOBILE DRIVERS  
 AVAILABILITY: NTIS

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Barrow, W.; Crawford, E.; Weinberg, M.  
 Johns Hopkins University, Center for Metropolitan Planning and Research  
 ADDRESS: Baltimore, MD 21218  
 TITLE: The Outlook for Automotive Fuel Supplies and Alternative Vehicle Engines, 1985-2010: Implications for Transportation and State Tax Structures

167 p.

1978, May

SPONSOR: Maryland Dept. of Transportation  
 KEYWORDS: TRANSPORTATION; AUTOMOTIVE FUELS; AUTOMOTIVE ENGINES; FORECASTING; TAXES; ALTERNATE FUELS; SYNTHETIC FUELS; ELECTRIC VEHICLES; REVENUE; HIGHWAYS; MARYLAND; ELECTRIC POWER DEMAND; GASOLINE; DIESEL FUELS; FUEL CONSUMPTION; ELECTRIC POWER NETS; HEAT ENGINES

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 Mobil Research and Development Corp.  
 TITLE: Potential Passenger Car Demand for Diesel Fuel and Refining Implications

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1977

SPONSOR: Society of Automotive Engineers  
 KEYWORDS: AUTOMOBILES; DEMAND (ECONOMICS); DIESEL FUELS; PETROLEUM REFINING; COMPARATIVE EVALUATIONS; GASOLINE; FUEL ECONOMY; PERFORMANCE; AUTOMOTIVE EMISSIONS  
 AVAILABILITY: Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096

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Basile, P.S. (ed.)  
 Massachusetts Institute of Technology, Workshop on Alternative Energy Strategies (WAES)  
 ADDRESS: Cambridge, MA 02139

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TITLE: Energy Supply-Demand Integrations to the Year 2000: Global and National Studies

Third Technical Report of the Workshop on Alternative Energy Strategies (WAES), 720 p.  
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SPONSOR: National Science Foundation  
 KEYWORDS: ITALY; JAPAN; MEXICO; NETHERLANDS; NORWAY; SWEDEN; UNITED KINGDOM; UNITED STATES; EUROPE; MODELS; INTERNATIONAL ANALYSIS; ENERGY SUPPLIES; ENERGY DEMAND; FORECASTING; ENERGY BALANCE; ENERGY CONSUMPTION; PRICES; GROWTH; TRANSPORTATION; RESIDENTIAL SECTOR; COMMERCIAL SECTOR; INDUSTRIAL SECTOR; INDUSTRIES; FUELS; TABLES (DATA); INTERNATIONAL TRADE; IMPORTS; EXPORTS; GROSS NATIONAL PRODUCT; CANADA; DENMARK; FINLAND; FRANCE; GERMANY FEDERAL REPUBLIC  
 AVAILABILITY: MIT Press, Cambridge, MA 02139 \$30.00

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 U.S. Dept. of Transportation, National Highway Traffic Safety Administration  
 ADDRESS: Washington, DC  
 TITLE: Impact of Diagnostic Inspection on Automotive Fuel Economy and Emissions

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KEYWORDS: FUEL ECONOMY; FUEL CONSUMPTION; REPAIR; GASOLINE; AUTOMOBILES; AUTOMOTIVE EMISSIONS; MAINTENANCE; COSTS; TESTING; GRAPHS (CHARTS); TABLES (DATA)  
 AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096 \$2.50

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 Wisconsin, University of, Engineering Experiment Station  
 ADDRESS: 1500 Johnson Drive, Madison, WI 53706  
 TITLE: Increased Fuel Economy in Transportation Systems by Use of Energy Management - Third Year's Program

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 1976, July

SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of University Research  
 KEYWORDS: COMPUTERIZED SIMULATION; FLYWHEELS; EMISSIONS; FUEL ECONOMY; ENERGY CONSERVATION; DIAGRAMS; GRAPHS (CHARTS); AUTOMOBILES; CONTINUOUSLY-VARIABLE TRANSMISSIONS  
 AVAILABILITY: NTIS

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Bechtold, R.L.  
 U.S. Dept. of Energy, Bartlesville Energy Research Center  
 ADDRESS: Bartlesville, OK 74003  
 TITLE: An Investigative Study of Engine Limiting

Report No. BNRC/EI-77/13, 19 p.

1978, February  
 KEYWORDS: ENGINES; FUEL CONSUMPTION; GRAPHS (CHARTS); AUTOMOTIVE EMISSIONS; EFFICIENCY; TESTING; CYLINDERS; TABLES (DATA); FUEL ECONOMY; VELOCITY  
 AVAILABILITY: NTIS

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U.S. Dept. of Energy, Bartlesville Energy  
Research Center  
ADDRESS: Bartlesville, OK  
TITLE: Performance of Gasoline and Diesel Fuels  
Produced from Coed Syncrude

Report No. BERC/RI-78/2, 22 p.  
1978, June

KEYWORDS: GASOLINE; DIESEL FUELS; PERFORMANCE;  
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IGNITION ENGINES; STIRLING ENGINES;  
STRATIFIED CHARGE ENGINES; COMPARATIVE  
EVALUATIONS; TESTING; GRAPHS (CHARTS); TABLES  
(DATA); AUTOMOTIVE EMISSIONS

AVAILABILITY: NTIS

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Energy Research and Development Administration,  
Bartlesville Energy Research Center  
ADDRESS: Bartlesville, OK  
TITLE: Valve Timing--Its Effect on Emissions and  
Fuel Economy

Report No. BERC/RI-77/9, 12 p.  
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KEYWORDS: FUEL ECONOMY; FUEL CONSUMPTION;  
AUTOMOTIVE EMISSIONS; TABLES (DATA); GRAPHS  
(CHARTS); PERFORMANCE; POLLUTION CONTROL  
EQUIPMENT; EFFICIENCY; NITROGEN OXIDES;  
HYDROCARBONS; CARBON MONOXIDE; VALVES;  
AUTOMOTIVE EMISSION CONTROL

AVAILABILITY: NTIS

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TITLE: Behavior of Car Owners During the Gasoline  
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Traffic Quarterly, 30(3), 471-483  
1976, July

KEYWORDS: BEHAVIOR; AUTOMOBILES; OWNERS;  
GASOLINE; SHORTAGES; ATTITUDES;  
TRANSPORTATION; MARKET; SURVEYS; VEHICLE  
TRIPS; SOCIO-ECONOMIC FACTORS; PORTLAND  
(OREGON); INCOME; FAMILY LIFE; TRANSPORTATION  
MODE CHOICE

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Beglinger, R.E.; Behaan, J.  
Marquette University, Urban Transportation Program  
ADDRESS: Milwaukee, WI 53233  
TITLE: Effect of Energy Shortage and Land Use on  
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Report No. PB-254921, UMTA-WI-11-0002-75-1, 39 p.  
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SPONSOR: U.S. Dept. of Transportation, Urban Mass  
Transportation Administration  
KEYWORDS: ENERGY SHORTAGES; LAND USE;  
AUTOMOBILES; AUTOMOBILE OCCUPANCY; HIGHWAY  
TRANSPORTATION; PRICES; GASOLINE;  
AVAILABILITY; MAPS; GRAPHS (CHARTS); TABLES  
(DATA)

AVAILABILITY: NTIS

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Behling, D.J., Jr.  
Brookhaven National Laboratory, National Center  
for Analysis of Energy Systems, Economic  
Analysis Division  
ADDRESS: Upton, NY 11973

TITLE: Analysis of Past and Expected Future  
Trends in U.S. Energy Consumption, 1947-2000

Report No. BNL-50725, 69 p.

1977, February  
SPONSOR: U.S. Dept. of Energy, Office of Planning  
and Analysis

KEYWORDS: ENERGY CONSUMPTION; INDUSTRIAL SECTOR;  
FORECASTING; HISTORY; PRICES; MODELS; FUELS;  
GROWTH; TRANSPORTATION; RESIDENTIAL SECTOR;  
ENERGY ANALYSIS; AGRICULTURE; ENERGY  
CONSERVATION; FUEL CONSUMPTION; GOVERNMENT  
POLICIES; AUTOMOTIVE INDUSTRY

AVAILABILITY: NTIS

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L.G.; Rubin, B.; Schwartz, M.W.; Waide, C.H.;  
Walsh, W.J.  
Lawrence Berkeley Laboratory; Interplan Corp.;  
Brookhaven National Laboratory; Argonne  
National Laboratory  
TITLE: Energy Storage Systems for Automobile  
Propulsion. Volume 1. Overview and Findings

Report No. UCRL-52303, 55 p.

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SPONSOR: U.S. Dept. of Energy

KEYWORDS: ELECTRIC VEHICLES; HYBRID  
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PERFORMANCE; COSTS; ENVIRONMENTAL IMPACT;  
TABLES (DATA); PROPULSION; BATTERIES;  
AUTOMOTIVE ENGINES; GRAPHS (CHARTS);  
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AVAILABILITY: NTIS

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ADDRESS: McLean, VA 22101  
TITLE: Factors, Trends, and Guidelines Related to  
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National Cooperative Highway Research Program  
Report 89, 59 p.

1970

SPONSOR: American Association of State Highway  
Officials; U.S. Bureau of Public Roads;  
National Academy of Sciences, National  
Research Council, Highway Research Board

KEYWORDS: GRAPHS (CHARTS); TABLES (DATA); MAPS;  
VEHICLE TRIPS; TRAFFIC; URBAN AREAS; LAND  
USE; TRANSPORTATION SYSTEMS; URBAN  
TRANSPORTATION; PLANNING; SIOUX CITY (IOWA);  
READING (PENNSYLVANIA); DETROIT (MICHIGAN);  
AUTOMOBILES; MASS TRANSPORTATION

AVAILABILITY: National Academy of Sciences,  
Highway Research Board, 2101 Constitution  
Ave. NW, Washington, DC 20418 \$3.20

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Bellomo, S.J.; Mehra, J.J.  
Voorhees (Alan M.) and Associates Inc.  
ADDRESS: 7600 Old Springhouse Road, McLean, VA  
22101

TITLE: Statewide Travel Forecasting Procedures  
Including Activity Allocation and Weekend  
Travel Phase II. Weekend Travel Model

Report No. PB-252611, 126 p.

1974, August

SPONSOR: U.S. Dept. of Transportation, Federal  
Highway Administration, Office of Highway  
Planning, Program Management Division

KEYWORDS: WEEKEND TRAVEL; VEHICLE TRIPS;  
CONNECTICUT; RECREATIONAL TRAVEL; STOCHASTIC  
PROCESSES; SIMULATION; MODELS; LIFE STYLE;  
DISTRIBUTION; LAND USE; FORECASTING; TABLES



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(DATA); GRAPHS (CHARTS)  
AVAILABILITY: NTIS

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Ben-Akiva, M.; Lerman, S.R.  
Massachusetts Institute of Technology, Dept. of  
Civil Engineering, Transportation Systems  
Division  
ADDRESS: Cambridge, MA 02139  
TITLE: Use of Forecasting Models in  
Transportation Planning

Paper presented at a conference at Oak Ridge,  
Tennessee, May 5-6, 1975, published in the  
proceedings, Population Forecasting for Small  
Areas (Report No. CONF-750514), 73-82

1977  
KEYWORDS: FORECASTING; MODELS; TRANSPORTATION;  
PLANNING; URBAN TRANSPORTATION; DEMAND  
(ECONOMICS); GOVERNMENT POLICIES; RESEARCH  
AVAILABILITY: Oak Ridge Associated Universities,  
P.O. Box 117, Oak Ridge, TN 37830 for entire  
proceedings

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Bernard, M.J.; LaBelle, S.J.; Miller, M.;  
Walbridge, E.W.  
Argonne National Laboratory, Energy and  
Environmental Systems Division  
ADDRESS: 9700 South Cass Avenue, Argonne, IL  
60439  
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CARGO TRANSPORTATION  
AVAILABILITY: NTIS

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Volkswagenwerk AG  
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ANALYSIS; COMPARATIVE EVALUATIONS; TOXICITY;  
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ENG. DES. DESIGN; MARKET; GRAPHS (CHARTS)  
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Billing, J.R.; Grouni, H.W.; Vuchic, V.R.  
Ontario Ministry of Transportation and  
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Division; Pennsylvania, University of, Dept.  
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PA  
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SPONSOR: National Academy of Sciences,  
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 Wilson, D.G.  
 Hague International; Argonne National Laboratory;  
 California, University of; Massachusetts  
 Institute of Technology  
 ADDRESS: HI, The Hague, Netherlands; ANL, 9700  
 South Cass Avenue, Argonne, IL 60439; CO,  
 Berkeley, CA 94720; MIT, Cambridge, MA 02139  
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 AVAILABILITY: Society of Automotive Engineers  
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 ADDRESS: LBL, University of California,  
 Livermore, CA 94550; LBL, Berkeley, CA 94720  
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 GRAPHS (CHARTS); CALIFORNIA; COSTS; ALTERNATE  
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ELASTICITY (ECONOMICS); PRICES; ENERGY  
DEMAND; AUTOMOBILES; LIFE STYLE; UNITED  
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KEYWORDS: ELECTRIC VEHICLES; RESEARCH PROGRAMS; INTERNATIONAL ANALYSIS; HYBRID ELECTRIC-POWERED VEHICLES; BATTERIES; AUTOMOTIVE TRANSMISSIONS; DESIGN; UTILIZATION; MILITARY EQUIPMENT; FORECASTING  
 AVAILABILITY: NTIS

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Byers, L.; Bordeaux, C.B.; Davis, W.; Whitley, A.; Gillespie, W.  
 Federal Energy Administration, Office of Energy Information and Analysis, Price Analysis Division  
 ADDRESS: Washington, DC 20461

TITLE: Monthly Petroleum Product Price Report

Monthly report, approximately 20 p.

KEYWORDS: PETROLEUM PRODUCTS; PRICES; STATISTICS; HISTORY; SURVEYS  
 AVAILABILITY: NTIS

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Cadotte, E.R.; Robicheaux, R.A.  
 Tennessee, University of, Transportation Center  
 ADDRESS: Knoxville, TN  
 TITLE: Institutional Issues in Urban Freight Consolidation

Report No. TC 76-035, 46 p.

1976, December

KEYWORDS: URBAN TRANSPORTATION; CARGO TRANSPORTATION; ECONOMIC IMPACT; BENEFIT RISK ANALYSIS; TABLES (DATA); PLANNING; INDUSTRIES; GOVERNMENT POLICIES; DISTRIBUTION; SERVICES; TRUCKS; PROFITS; EFFICIENCY

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Cambridge Systematics Inc.  
 ADDRESS: Kendall Square Bldg., 238 Main St., Cambridge, MA 02142  
 TITLE: State Energy Conservation Plans: Guidelines for Travel Demand Analyses of Program Measures to Promote Carpools, Vanpools, and Public Transportation

Report No. PB-271100, FEA/E-77/331, 110 p.

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; CARPOOLING; VANPOOLS; PUBLIC TRANSPORTATION; TABLES (DATA); GRAPHS (CHARTS); TRANSPORTATION; PLANNING; STATE GOVERNMENT; GOVERNMENT POLICIES; DEMAND (ECONOMICS); FORECASTING; MANUALS  
 AVAILABILITY: NTIS

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Campbell, E.A.  
 Electric Vehicle Council  
 ADDRESS: 90 Park Ave., New York, NY 10016  
 TITLE: Impact 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 31 - September 2, 1976, 12 p.

1976, September

KEYWORDS: ELECTRIC VEHICLES; FORECASTING; ENERGY CONSERVATION; TRANSPORTATION; PETROLEUM; ENERGY CONSUMPTION; VEHICLE REGISTRATIONS; TABLES (DATA); SALES; ENERGY DEMAND; RESIDENTIAL SECTOR; LOAD MANAGEMENT; ELECTRIC POWER DEMAND  
 AVAILABILITY: Electric Vehicle Council, 90 Park Ave., New York, NY 10016 \$1.50

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Campbell, E.A.  
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 ADDRESS: 90 Park Avenue, New York, NY 10016  
 TITLE: Analysis of On-Road Electric Vehicle Experiences of 62 U.S. Utilities

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SPONSOR: Society of Automotive Engineers  
 KEYWORDS: ELECTRIC VEHICLES; ELECTRIC UTILITIES; VANS; PERFORMANCE; EFFICIENCY; MAINTENANCE; TEMPERATURE; AUTOMOBILE DRIVERS; ELECTRIC POWER DEMAND; ENERGY CONSUMPTION  
 AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096

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Campbell, K.; Scott, R.; Tolkin, S.  
 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

Report No. PB-254678, DOT-HS-801933, 151 p.

1976, June

SPONSOR: U.S. Dept. of Transportation, National Highway Traffic Safety Administration  
 KEYWORDS: HIGHWAYS; SAFETY; ACCIDENTS; ENERGY

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SHORTAGES; AUTOMOBILES; TRUCKS; TRAFFIC;  
SPEED LIMITS; COMPARATIVE EVALUATIONS;  
VEHICLE MILES TRAVELED; TABLES (DATA); STATE  
ANALYSIS  
AVAILABILITY: NTIS

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Carr, E.S.; Harsch, W.C., Jr.; Erisman, L.R.;  
Judd, D.  
Eagle-Picher Industries Inc.  
ADDRESS: Joplin, MO  
TITLE: Near-Term Advanced Electric Vehicle  
Batteries

Paper presented at the Fourth International  
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Electric Vehicle Council and the  
International Union of Producers and  
Distributors of Electrical Energy), held in  
Dusseldorf, Germany, August 31 - September 2,  
1976, 16 p.

1976, September  
KEYWORDS: BATTERIES; ELECTRIC VEHICLES; LEAD-ACID  
BATTERIES; NICKEL-IRON BATTERIES; NICKEL-ZINC  
BATTERIES; RESEARCH; LIFE (DURABILITY);  
PERFORMANCE

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

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Carroll, T.O.; Kyles, A.S.; Sanborn, J.  
Brookhaven National Laboratory, National Center  
for Analysis of Energy Systems, Policy  
Analysis Division; State University of New  
York, Institute for Energy Research  
ADDRESS: BNL, Upton, NY 11973; SUNY, Stony  
Brook, NY 11790  
TITLE: Land Use - Energy Simulation Model: A  
Computer-Based Model for Exploring Land Use  
and Energy Relationships

Report No. BNL 50634, 69 p.

1977, June

SPONSOR: Federal Energy Administration, Office of  
Energy Conservation and Environment

KEYWORDS: ENERGY MODELS; COMPUTERIZED SIMULATION;  
LAND USE; RESIDENTIAL SECTOR; TRANSPORTATION;  
INDUSTRIAL SECTOR; ENERGY DEMAND; REGIONAL  
ANALYSIS; NEW YORK; SUBURBAN AREAS

AVAILABILITY: NTIS

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Carroll, T.O.; Nathans, R.; Palmedo, P.F.; Stern,  
E.  
Brookhaven National Laboratory, National Center  
for Analysis of Energy Systems, Policy  
Analysis Division; State University of New  
York, Institute for Energy Research  
ADDRESS: BNL, Upton, NY 11973; SUNY, Stony  
Brook, NY 11790  
TITLE: The Planner's Energy Workshop: A Manual  
for Exploring Relationships Between Land Use  
and Energy Utilization

Report No. BNL 50633, 132 p.

1977, June

SPONSOR: Federal Energy Administration, Office of  
Energy Conservation and Environment

KEYWORDS: PLANNING; LAND USE; ENERGY CONSUMPTION;  
LOCAL GOVERNMENT; GOVERNMENT POLICIES; ENERGY  
CONSERVATION; TUSCON (ARIZONA); LONG ISLAND  
(NEW YORK); RESIDENTIAL SECTOR; COMMERCIAL  
SECTOR; INDUSTRIES; TRANSPORTATION; ENERGY  
INTENSITY; REGIONAL ANALYSIS; COMMUNITIES;  
TABLES (DATA)

AVAILABILITY: NTIS

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Carter, J.C.  
Executive Office of the President  
ADDRESS: Washington, DC  
TITLE: Highway and Transit Programs: Message to  
the Congress Proposing Legislation

Administration of Jimmy Carter, 1976, Weekly  
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220-223.

1976, January 26

KEYWORDS: HIGHWAYS; MASS TRANSPORTATION;  
LEGISLATION; GOVERNMENT POLICIES;  
CONSTRUCTION; PLANNING; FUNDING; RURAL  
TRANSPORTATION; URBAN TRANSPORTATION; SAFETY;  
STATE GOVERNMENT; LOCAL GOVERNMENT

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Cataldo, R.L.  
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. CONS/1044-1,  
NASA TN-73834, 8 p.

1978, February

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

KEYWORDS: LEAD-ACID BATTERIES; SIMULATION;  
ELECTRIC VEHICLES; VELOCITY; CONTROL;  
ELECTRIC DISCHARGES; CAPACITY; DESIGN; ENERGY  
LOSSES

AVAILABILITY: NTIS

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Cato, D.; Rodekoher, M.; Sweeney, J.L.  
Federal Energy Administration  
ADDRESS: Washington, DC  
TITLE: Demand for Gasoline: Application of  
Commodity Hierarchy Theory

Part of Proceedings of the Business and Economic  
Statistics Section, American Statistical  
Association, 5 p.

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KEYWORDS: GASOLINE; FUEL CONSUMPTION; DEMAND  
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(DATA); AUTOMOBILES; FUEL ECONOMY

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WEIGHT; VOLUME; FUEL CONSUMPTION; VEHICLE  
MILES TRAVELED; PRICES; SALES; INCOME;  
ELASTICITY (ECONOMICS); FORECASTING; TAXES;  
TECHNOLOGY ASSESSMENT

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Ceppos, R.

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Car and Driver, 24(2), 28  
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Chang, G.C. (ed.); Stone R.G. (ed.)

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Proceedings

1978, March

Report No. CONF-771053, proceedings of a  
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TransportationKEYWORDS: FLYWHEELS; UTILIZATION; TRANSPORTATION;  
HYBRID ELECTRIC-POWERED VEHICLES; DESIGN;  
ENERGY STORAGE; ELECTRIC VEHICLES; TESTING;  
TECHNOLOGY ASSESSMENT; MATERIALS;  
COMMERCIALIZATION; DIAGRAMS; COSTS; GRAPHS  
(CHARTS); COMPARATIVE EVALUATIONS; TABLES  
(DATA)

AVAILABILITY: NTIS

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Chang, M.C.

Airessearch Manufacturing Co.

ADDRESS: Torrance, CA

TITLE: Computer Simulation of an Advanced Hybrid  
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KEYWORDS: HYBRID ELECTRIC-POWERED VEHICLES;  
COMPUTERIZED SIMULATION; REGENERATIVE FUEL  
CELLS; FLYWHEELS; LEAD-ACID BATTERIES;  
REGENERATIVE BRAKING; ENERGY STORAGE; ENERGY  
CONVERSION; GRAPHS (CHARTS)AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
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Charles River Associates Inc.

ADDRESS: 1050 Massachusetts Ave., Cambridge, MA  
02138TITLE: Methodology for Predicting the Demand for  
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91 p.

1977, December

SPONSOR: Electric Power Research Institute

KEYWORDS: ENERGY CONSUMPTION; FORECASTING;  
ELECTRIC POWER DEMAND; EQUIPMENT; MODELS;  
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ATTITUDES; IMPORTS; PRICESAVAILABILITY: Electric Power Research Institute,  
3812 Hillview Avenue, Palo Alto, CA 94304

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Charles River Associates Inc.

ADDRESS: 1050 Massachusetts Ave., Cambridge, MA  
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1978, January 9SPONSOR: U.S. Dept. of Transportation, National  
Highway Traffic Safety AdministrationKEYWORDS: BEHAVIOR; CONSUMERS; AUTOMOBILES;  
PUBLIC OPINION; ATTITUDES; SURVEYS;  
PURCHASING; MARKET; COSTS; UTILIZATION;  
PRICES; FUEL ECONOMY; TRUCKS; BUSES (VEHICLES)

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ADDRESS: 1050 Massachusetts Avenue, Cambridge, MA  
02138TITLE: 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  
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JET ENGINE FUELS; TRANSPORTATION; PASSENGER  
TRANSPORTATION; RATES (COSTS); CARGO  
TRANSPORTATION; ECONOMETRIC MODELS; URBAN  
AREAS; AUTOMOBILES; BIBLIOGRAPHIES

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Conservation, Transportation ProgramKEYWORDS: ENERGY CONSERVATION; CARGO  
TRANSPORTATION; INTERSTATE TRANSPORTATION;  
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CONSUMPTION; MARKET; EFFICIENCY; INTERSTATE  
COMMERCE COMMISSION; ECONOMIC ANALYSIS;  
TABLES (DATA); REGULATIONS; FUEL CONSUMPTI  
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AVAILABILITY: NTIS

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Cherniavsky, E.A.; Kydes, A.S.; Davidoff, J.W.  
Brookhaven National Laboratory, National Center  
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Group

ADDRESS: Upton, NY 11973

TITLE: Multi-Objective Function Analysis of ERDA  
Forecast-2, Year-2000 Scenario

Report No. BNL 50685, 46 p.

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SPONSOR: Energy Research and Development  
Administration, Office of Planning, Analysis  
and EvaluationKEYWORDS: FORECASTING; PETROLEUM; IMPORTS; ENERGY  
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CAPITAL; COSTS; ENVIRONMENTAL IMPACT; TABLES  
(DATA)

AVAILABILITY: NTIS



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Chilenskas, A.A.; Bernstein, G.J.; Cress, J.E.A.;  
Hornstra, P.; Kolba, V.H.; Slavecki, H.A.;  
Ivins, R.O.  
Argonne National Laboratory  
ADDRESS: Argonne, IL  
TITLE: Design and Testing of Lithium/Iron Sulfide  
Batteries for Electric Vehicle Propulsion

Paper presented at the Fourth International  
Electric Vehicle Symposium (sponsored by the  
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International Union of Producers and  
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KEYWORDS: LITHIUM/IRON SULFIDE BATTERIES;  
LITHIUM/METAL SULFIDE BATTERIES; ELECTRIC  
VEHICLES; RESEARCH; DESIGN; TESTING;  
PERFORMANCE; DIAGRAMS  
AVAILABILITY: Electric Vehicle Council, 90 Park  
Ave., New York, NY 10016 \$1.50

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Chilenskas, A.A.; Bernstein, G.J.; Ivins, R.O.  
Argonne National Laboratory, Chemical Engineering  
Division  
ADDRESS: 9700 South Cass Avenue, Argonne, IL  
60439  
TITLE: Lithium Requirements for High-Energy  
Lithium-Aluminum/Iron Sulfide Batteries for  
Load-Leveling and Electric-Vehicle  
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LOAD MANAGEMENT; ELECTRIC UTILITIES; DEMAND  
(ECONOMICS); FORECASTING;  
LITHIUM-ALUMINUM/METAL SULFIDE BATTERIES  
AVAILABILITY: NTIS

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Chiodioji, M.H.  
Energy Research and Development Administration,  
Division of Buildings and Industry  
ADDRESS: Washington, DC  
TITLE: Roadway Decision-Making and Implications  
for Energy Use - Some Economic Considerations

Paper published in Transportation Research Board  
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1976  
KEYWORDS: HIGHWAYS; CAPITAL COSTS; ENERGY  
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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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Clachette, I.R.  
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TITLE: Contractors' View on Optimizing Materials  
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Paper published in Transportation Research Board  
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KEYWORDS: HIGHWAYS; MATERIALS; ENERGY  
CONSUMPTION; CONSTRUCTION; CEMENTS; ASPHALTS;  
STANDARDS  
AVAILABILITY: National Academy of Sciences,  
National Research Council, Transportation  
Research Board, 2101 Constitution Ave. NW,  
Washington, DC 20418 \$6.00 for TRB Special  
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Ciccarone, A.; Antonini, C.; Virgilio, U.  
Alfa Romeo Research Dept.  
ADDRESS: Italy  
TITLE: Fuel Consumption in European Passenger  
Cars Powered by Gasoline, Diesel, and Direct  
Injection Stratified Charge Engines

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KEYWORDS: FUEL CONSUMPTION; AUTOMOBILES;  
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ENGINES; EUROPE; COMPUTERIZED SIMULATION;  
COMPARATIVE EVALUATIONS; AUTOMOTIVE  
EMISSIONS; TABLES (DATA); GRAPHS (CHARTS);  
EFFICIENCY; PERFORMANCE  
AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096

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Civil Aeronautics Board, Bureau of Accounts and  
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ADDRESS: Washington, DC 20428  
TITLE: Aircraft Operating Cost and Performance  
Report for Calendar Years 1975 and 1976

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KEYWORDS: AIRCRAFT; OPERATING COSTS; PERFORMANCE;  
TABLES (DATA); FINANCIAL DATA; STATISTICS;  
TRAFFIC; CAPACITY; AIR TRANSPORTATION  
AVAILABILITY: GPO, Stock No. 003-006-00073-5

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Civil Aeronautics Board, Bureau of Accounts and  
Statistics, Economic Evaluation Division  
ADDRESS: Washington, DC 20428  
TITLE: Turbojet/Turboprop Aircraft Operating Cost  
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KEYWORDS: AIR TRANSPORTATION; EQUIPMENT;  
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TABLES (DATA); AIRCRAFT; COSTS; CAPITAL

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 ADDRESS: Washington, DC 20428  
 TITLE: Commuter Air Carrier Traffic Statistics: 12 Months Ended June 30, 1977

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 STATISTICS; AIR TRANSPORTATION; TABLES  
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 TRANSPORTATION; AIRPORTS

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 ADDRESS: Washington, DC  
 TITLE: Truck Carriers--Coach Class: Traffic, Revenue, Yield, Enplanements and Average On-Flight Trip Length by Fare Category (48 State Basis)

Monthly publication, formerly titled "Coach Traffic, Revenue, Yield and Average On-Flight Trip Length by Fare Category for the 48-State Operations of the Domestic Trunks", v.p.

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KEYWORDS: TRAFFIC; REVENUE; REGIONAL ANALYSIS;  
 TABLES (DATA); PASSENGER ENPLANEMENTS

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 TITLE: A Profile of Airline Service in the 48 Contiguous States, June 1, 1975

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KEYWORDS: AIR TRANSPORTATION; TABLES (DATA);  
 REGIONAL ANALYSIS; SERVICES; AIRCRAFT;  
 PASSENGER TRANSPORTATION; POPULATION  
 (STATISTICS); URBAN AREAS; STATISTICS;  
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 ADDRESS: Washington, DC 20428  
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63 p.

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KEYWORDS: PASSENGER ENPLANEMENTS; PASSENGER  
 TRANSPORTATION; AIRPORTS; AIRCRAFT;  
 STATISTICS; TABLES (DATA); REGIONAL ANALYSIS;  
 SERVICES

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 ADDRESS: Washington, DC 20428  
 TITLE: Transline Carrier Domestic Passenger Enplanements: Fiscal Years 1976 and 1975

95 p.

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KEYWORDS: AIRPORTS; PASSENGER TRANSPORTATION; AIR  
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 STATISTICS; TABLES (DATA); PASSENGER  
 ENPLANEMENTS; SERVICES

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Civil Aeronautics Board, Financial and Traffic Data Section; U.S. Dept. of Transportation, Federal Aviation Administration, Office of Management Systems  
 ADDRESS: CAB, 1825 Connecticut Ave. NW, Washington, DC 20428; DOT/FAA, 800 Independence Ave. SW, Washington, DC 20591  
 TITLE: Airport Activity Statistics of Certified Route Air Carriers for 12 Months Ended December 31, 1976

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 (DATA); SCHEDULING; PASSENGER TRANSPORTATION;  
 CARGO TRANSPORTATION; AIR TRANSPORTATION;  
 STATE ANALYSIS; PASSENGER ENPLANEMENTS  
 AVAILABILITY: NTIS

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

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SPONSOR: National Academy of Sciences, Transportation Research Board  
 KEYWORDS: GROWTH; URBAN AREAS; TRAVEL; POPULATION  
 GROWTH; FORECASTING; WASHINGTON; EMPLOYMENT;  
 TRANSPORTATION SYSTEMS; PERFORMANCE;  
 COMPUTERIZED SIMULATION  
 AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418 \$6.00 for Transportation Research Record No. 565

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Clark, N. (ed.)  
 National Academy of Sciences, National Research Council, Transportation Research Board, Commission on Sociotechnical Systems  
 ADDRESS: 2101 Constitution Avenue NW, Washington, DC  
 TITLE: Strategies for Reducing Gasoline Consumption Through Improved Motor Vehicle Efficiency. A Report of an Informal Transportation Research Board Workshop

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 KEYWORDS: GASOLINE; CONSUMPTION; VEHICLES;  
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 CONSUMPTION; MARKET; ENERGY CONSERVATION;  
 FORECASTING; DEMAND (ECONOMICS); SPEED



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LIMITS: VELOCITY; SAFETY; AUTOMOTIVE  
EMISSIONS; FUEL ECONOMY; TAXES; ELECTRIC  
VEHICLES  
AVAILABILITY: \$2.40

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Clark, M. (ed.)  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Optimizing the Use of Materials and Energy  
in Transportation Construction

Transportation Research Board Special Report 166,  
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12-14, 1975, 74 p.

1976

SPONSOR: U.S. Dept. of Transportation, Federal  
Highway Administration; Federal Energy  
Administration; Energy Research and  
Development Administration

KEYWORDS: ENERGY CONSUMPTION; TRANSPORTATION;  
CONSTRUCTION; HIGHWAYS; MATERIALS; ENERGY  
CONSERVATION; ASPHALT; SULFUR; CEMENTS;  
FORECASTING; ENERGY SHORTAGES; PETROLEUM;  
GRAPHS (CHARTS); COSTS

AVAILABILITY: \$6.00

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Clark, M. (ed.)  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Avenue, Washington, DC  
20418  
TITLE: Transportation System Management

Transportation Research Board Special Report 172,  
proceedings of a conference held November  
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1977

SPONSOR: U.S. Dept. of Transportation, Urban Mass  
Transportation Administration; U.S. Dept. of  
Transportation, Federal Highway  
Administration; Institute of Transportation  
Engineers

KEYWORDS: TRAFFIC CONTROL; PARKING;  
TRANSPORTATION; AUTOMOBILE OCCUPANCY;  
GOVERNMENT POLICIES; CARGO TRANSPORTATION;  
PLANNING; US DOT; REGULATIONS; URBAN AREAS;  
AUTOMOBILES; PASSENGER TRANSPORTATION; PUBLIC  
OPINION

AVAILABILITY: \$6.80

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Clark, M. (ed.)  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Avenue NW, Washington,  
DC 20418  
TITLE: Dual-Mode Transportation

Transportation Research Board Special Report 170,  
proceedings of a conference conducted by the  
Transportation Research Board, May 29-31,  
1974, 164 p.

1976

KEYWORDS: PUBLIC TRANSPORTATION; DUAL-MODE BUS  
SYSTEMS; SCHEDULING; RIGHT-OF-WAY; URBAN  
TRANSPORTATION; BUSES (VEHICLES); TRANSIT  
STATIONS; TRAFFIC CONTROL; MAINTENANCE;  
CAPACITY; SAFETY; AUTOMATED GUIDEWAY TRANSIT

AVAILABILITY: \$6.40

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Clark, M. (ed.)  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Urban Transportation Alternatives:  
Evolution of Federal Policy

Transportation Research Board Special Report 177,  
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29-April 1, 1976, at Hunt Valley, Maryland,  
38 p.

1977

SPONSOR: U.S. Dept. of Transportation, Urban Mass  
Transportation Administration

KEYWORDS: GOVERNMENT POLICIES; URBAN  
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FUNDING; PLANNING; CONFERENCES; CONSTRUCTION;  
FINANCING

AVAILABILITY: \$2.00

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Clarkey, A.  
Energy Research Corp.  
ADDRESS: Danbury, CT  
TITLE: Development of Large Size Nickel-Zinc  
Cells for Electric Vehicles

Paper presented at the Fourth International  
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International Union of Producers and  
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KEYWORDS: NICKEL-ZINC BATTERIES; ELECTRIC  
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PERFORMANCE; BATTERY SEPARATORS

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

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Cockle, G.W. (ed.); Houser, F.W. (ed.); Koch,  
E.N. (ed.)  
Association of American Railroads, Mechanical  
Division  
ADDRESS: Washington, DC  
TITLE: Car and Locomotive Cyclopaedia of American  
Practices

Third Edition, v.-p.

1974

KEYWORDS: RAILROAD CARS; RAIL TRANSPORTATION;  
LOCOMOTIVES; DESIGN; CARGO TRANSPORTATION;  
PASSENGER TRANSPORTATION; EQUIPMENT; DIESEL  
ENGINES; SAFETY; MAINTENANCE; PHOTOGRAPHS;  
DIAGRAMS; MANUFACTURERS

AVAILABILITY: Simmons-Boardman Publishing Corp.,  
350 Broadway, New York, NY 10013

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Cohen, G.S.; Erlbaum, W.S.; Hartgen, D.T.  
New York State Dept. of Transportation, Planning  
and Research Bureau, Planning Research Unit  
ADDRESS: Albany, NY 12232  
TITLE: Intercity Rail Patronage in the NYC -  
Buffalo Corridor: Models and Forecasts.  
Volume III

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SPONSOR: U.S. Dept. of Transportation, Office of  
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CITY; BUFFALO (NEW YORK); MODELS;  
FORECASTING; COMPETITION; AIR TRANSPORTATION;  
AUTOMOBILES; BUSES (VEHICLES); ELASTICITY  
(ECONOMICS); DEMAND (ECONOMICS);  
TRANSPORTATION MODE CHOICE; TABLES (DATA);  
GRAPHS (CHARTS)

GRAPHS (CHARTS); ELECTRIC POWER DEMAND;  
REGIONAL ANALYSIS; TABLES (DATA)

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Cohen, S.B.

Wyle Laboratories

ADDRESS: P.O. Box 1008, Huntsville, AL 35807

TITLE: Regulatory Effectiveness Methodology.  
Phase I ResearchReport No. ADA-036579, CG-D 7-77, MSR 76-42, 93 p.  
1976, July

SPONSOR: U.S. Dept. of Transportation, Coast  
Guard, Office of Research and Development  
KEYWORDS: REGULATIONS; RECREATION VEHICLES;  
BOATS; SAFETY; MODELS; FORECASTING  
AVAILABILITY: NTIS

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Colello, R.G.

U.S. Dept. of Transportation, Transportation

Systems Center

ADDRESS: Kendall Square, Cambridge, MA 02142

TITLE: Automobile Drivelines

Report No. DOT-TSC-OST-77-34, 56 p.

1977, May

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 Systems Center  
KEYWORDS: AUTOMOBILE TRANSMISSIONS; FUEL ECONOMY;  
AUTOMOBILES; ACCELERATION; AUTOMOTIVE  
EMISSIONS; COMPUTERIZED SIMULATION;  
PERFORMANCE; FUEL CONSUMPTION; GRAPHS  
(CHARTS); DIAGRAMS  
AVAILABILITY: NTIS

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Coleman, W.T., Jr.

U.S. Dept. of Transportation, Office of the

Secretary

ADDRESS: Washington, DC 20590

TITLE: A Progress Report: Implementation of the  
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23 p.

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KEYWORDS: TRANSPORTATION; GOVERNMENT POLICIES;  
REGULATIONS; ENERGY CONSERVATION; SUBSIDIES;  
RAIL TRANSPORTATION; AIR TRANSPORTATION;  
URBAN TRANSPORTATION; COAL; PETROLEUM;  
SAFETY; ENVIRONMENTAL IMPACT

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Collins, H.H.; Carriere, W.H.

General Research Corp.

ADDRESS: P.O. Box 3587, Santa Barbara, CA 93105

TITLE: Energy Impacts of Electric Cars

Releasable Memorandum, Report No. RM-2101, 47 p.

1978, January

SPONSOR: U.S. Dept. of Energy  
KEYWORDS: ELECTRIC VEHICLES; FORECASTING; ENERGY  
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ELECTRIC POWER GENERATION; BATTERY CHARGING;

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ADDRESS: CDC, 607 Valleybrook Drive, Silver  
Spring, MD 20904; WRC, 6003 Executive Blvd.,  
Rockville, MDTITLE: Trends in Bus Transit Operations:  
1960-1974Report No. PB-266748, DOT-TPI-10-77-14, 134 p.  
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SPONSOR: U.S. Dept. of Transportation, Office of  
the Secretary, Office of the Assistant  
Secretary for Policy, Plans, and  
International Affairs; U.S. Dept. of  
Transportation, Urban Mass Transportation  
Administration

KEYWORDS: BUSES (VEHICLES); TABLES (DATA); GRAPHS  
(CHARTS); COSTS; URBAN TRANSPORTATION; FUEL  
CONSUMPTION; UTILIZATION; PUBLIC  
TRANSPORTATION; FINANCIAL DATA; PASSENGER  
TRANSPORTATION; REVENUE; EMPLOYMENT; HISTORY;  
SERVICES  
AVAILABILITY: NTIS

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Cook, J.A.; Pucinari, C.A.; Lingscheit, J.W.;

Rahnte, C.J.

Ford Motor Co.

ADDRESS: Dearborn, MI

TITLE: Automotive Gas Turbine Ceramic Regenerator  
Design and Reliability Program. Final  
Annual Report for Period July 1, 1975 to  
September 30, 1976

Report No. COO-2630-18, 299 p.

1976, October

SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: STIRLING ENGINES; HEAT EXCHANGERS;  
COSTS; PERFORMANCE; REGENERATORS; GAS TURBINE  
ENGINES; DIAGRAMS; GRAPHS (CHARTS); TABLES  
(DATA); STRESS ANALYSIS; THERMODYNAMICS  
AVAILABILITY: NTIS

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Cooper, J.F.; Borg, I.Y.; O'Connell, L.G.;

Behrin, E.; Rubin, B.; Wiesner, H.

Lawrence Livermore Laboratory

ADDRESS: University of California, Livermore, CA  
94550TITLE: Lithium Requirements for Electric Vehicles  
Using Lithium-Water-Air BatteriesReport No. UCRL-77440, COMP-760112-2, paper  
prepared for the Symposium on United States  
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Year 2000, January 22-24, 1976, Lakewood,  
Colorado, 18 p.

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Administration  
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BATTERIES; LITHIUM; BATTERIES; DEMAND  
(ECONOMICS); FORECASTING  
AVAILABILITY: NTIS

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ENERGY CONSERVATION; FUEL CONSUMPTION;  
RESIDENTIAL SECTOR; INDUSTRIAL SECTOR;  
INCENTIVES; ECONOMIC IMPACT; PETROLEUM;  
NATURAL GAS; AUTOMOBILES; TRANSPORTATION;  
PRICES

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Corsi, T.H.; Harvey, H.E.  
Maryland, University of, College of Business and  
Management; Kent State University  
ADDRESS: NU, College Park, MD; KSU, Kent, Ohio  
44240  
TITLE: Travel Behavior Under Increases in  
Gasoline Prices

Traffic Quarterly, XXXI(4), 605-624  
1977, October

KEYWORDS: TRAVEL; BEHAVIOR; GASOLINE; PRICES;  
TABLES (DATA); SOCIO-ECONOMIC FACTORS;  
ATTITUDES; QUESTIONNAIRES; SURVEYS; INCOME;  
WISCONSIN; GOVERNMENT POLICIES; ALLOCATIONS

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Craia Automotive Group Inc.  
ADDRESS: 965 East Jefferson Avenue, Detroit, MI  
48207  
TITLE: Automotive News

Weekly publication, v.p.  
Weekly

KEYWORDS: AUTOMOBILES; ENGINES; DIESEL ENGINES;  
MANUFACTURERS; FUEL ECONOMY; PRODUCTION;  
VANS; TRUCKS; CONSUMERS; TIRES; ELECTRIC  
VEHICLES; FUEL OIL; EMISSIONS; AUTOMOTIVE  
TRANSMISSIONS; ROAD TESTS; SALES; IMPORTS;  
EXPORTS; COSTS; TIRES; BUSES (VEHICLES);  
PRICES; AUTOMOTIVE INDUSTRY; INTERNATIONAL  
ANALYSIS; PHOTOGRAPHS; DESIGN; ADVERTISING

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Crane, D.P.; Bowman, J.R.  
U.S. Postal Service  
ADDRESS: Washington, DC  
TITLE: United States Postal Service Electric  
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Electric Vehicle Symposium, held in  
Dusseldorf, Germany, August 31 - September 2,  
1976, 28 p.

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KEYWORDS: ELECTRIC VEHICLES; TRUCKS; ENERGY  
CONSERVATION; AUTOMOTIVE FLEETS; AIR QUALITY;  
DEVELOPMENT; CUPERTINO (CALIFORNIA); COSTS;  
AUTOMOTIVE EMISSIONS; TABLES (DATA);  
COMPARATIVE EVALUATIONS; GRAPHS (CHARTS);  
FUEL CONSUMPTION; FUEL ECONOMY; POSTAL SERVICE  
AVAILABILITY: Electric Vehicle Council, 90 Park  
Ave., New York, NY 10016 \$1.50

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Crier, F.S.  
Washington Center for Metropolitan Studies  
ADDRESS: 1717 Massachusetts Avenue NW,  
Washington, DC 20036  
TITLE: "The Energy Crisis and Low-Income  
Americans: An Analysis of Impact and Options

171 p.  
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SPONSOR: Community Services Administration  
KEYWORDS: INCOME; LOW INCOME GROUPS; COSTS;  
SOCIO-ECONOMIC FACTORS; ENERGY CONSUMPTION;  
RESIDENTIAL SECTOR; BEHAVIOR; ENERGY  
CONSERVATION; TRANSPORTATION; HOUSING; SPACE  
HEATING; AUTOMOBILES; TABLES (DATA); SURVEYS;  
FUEL CONSUMPTION; ENERGY SHORTAGES

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Cuffe, K.W.  
General Motors Corp., Harrison Radiator Division  
ADDRESS: Lockport, NY  
TITLE: Air Conditioning and Heating Systems for  
Trucks

Report No. SAE/SP-78/425, 44 p.  
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KEYWORDS: TRUCKS; AIR CONDITIONING; DESIGN;  
PERFORMANCE; HUMAN COMFORT; ENGINEERING;  
THERMAL COMFORT; DIAGRAMS; GRAPHS (CHARTS)  
AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096 \$2.50

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Curtis, V. (ed.)  
American Society of Planning Officials  
ADDRESS: Chicago, IL  
TITLE: Land Use and the Environment - An  
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207 p.

SPONSOR: U.S. Environmental Protection Agency,  
Office of Research and Monitoring,  
Environmental Studies Division  
KEYWORDS: LAND USE; ENVIRONMENTAL QUALITY; AIR  
POLLUTION; GOVERNMENT POLICIES; INCENTIVES;  
URBAN AREAS; HISTORY; TABLES (DATA);  
RECREATION; NOISE (SOUND); FORECASTING; LAND  
DEVELOPMENT; ENVIRONMENTAL IMPACT

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Cyrus, J.D.  
Sandia Laboratories  
ADDRESS: Albuquerque, NM 87115; Livermore, CA  
94550  
TITLE: Proceedings of the Hybrid Vehicle Interest  
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Report No. SAND 76-0645, conference held  
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SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: HYBRID ELECTRIC-POWERED VEHICLES;  
CONFERENCES; HEAT ENGINES; SYSTEMS ANALYSIS;  
STORAGE; AUTOMOTIVE CONTROL SYSTEMS  
AVAILABILITY: NTIS

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Dajani, J.S.; Stortstrom, R.G.; Warner, D.B.  
Duke University, School of Engineering, Dept. of  
Civil Engineering; Duke University, Duke  
Environmental Center  
ADDRESS: Durham, NC  
TITLE: The Potential for Helicopter Passenger  
Service in Major Urban Areas

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1977, March

SPONSOR: National Aeronautics and Space  
Administration, Langley Research Center

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 COMPUTERIZED SIMULATION; COSTS; TABLES  
 (DATA); REGIONAL ANALYSIS; URBAN AREAS;  
 INTERCITY TRANSPORTATION; PASSENGER  
 TRANSPORTATION; AIRPORTS; URBAN TRANSPORTATION  
 AVAILABILITY: NTIS

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 Data Resources Inc.  
 ADDRESS: Lexington, MA  
 TITLE: A Study of the Demand for Gasoline  
 Final Report, Report No. PB-235254, 146 p.  
 1974, July  
 SPONSOR: Executive Office of the President,  
 Council on Environmental Quality; U.S.  
 Environmental Protection Agency  
 KEYWORDS: GASOLINE; PRICES; FUEL CONSUMPTION;  
 DEMAND (ECONOMICS); TAXES; VEHICLES; GROSS  
 NATIONAL PRODUCT; INCOME; ECONOMETRIC MODELS;  
 FORECASTING; AUTOMOBILES; TABLES (DATA);  
 ELASTICITY (ECONOMICS); ECONOMIC IMPACT  
 AVAILABILITY: NTIS

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 Davis, D.D.; O'Connell, L.G.; Warner, S.E.;  
 Paynard, A.E.; Rowlett, B.H.  
 Lawrence Livermore Laboratory; Aircorsearch  
 Manufacturing Co.  
 ADDRESS: LLL, Berkeley, CA  
 TITLE: Battery-Flywheel Hybrid Electric Power  
 System for Near Term Application. Volume 1:  
 System Description Volume 2: System Design  
 Informal Report, Report No. UCID-17098, 52 pages  
 for Volume 1, 81 pages for Volume 2  
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 SPONSOR: Energy Research and Development  
 Administration  
 KEYWORDS: TRANSPORTATION; BATTERIES; FLYWHEELS;  
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 CONSUMPTION; ALTERNATE FUELS; ELECTRIC  
 VEHICLES; LEAD-ACID BATTERIES; PERFORMANCE;  
 PETROLEUM; ENERGY DEMAND; DESIGN; ELECTRIC  
 VEHICLE RANGE  
 AVAILABILITY: NTIS

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 Davis, D.D.; Renner, R.A.; Younger, P.C.; Epps,  
 R.C.; Lerner, S.S.  
 Lawrence Livermore Laboratory  
 ADDRESS: University of California, P.O. Box 808,  
 Livermore, CA 94550  
 TITLE: Determination of the Effectiveness and  
 Feasibility of Regenerative Braking Systems  
 on Electric and Other Automobiles. Volume I  
 - Summary

Report No. UCRL-52306/1, 74 p.  
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 SPONSOR: Energy Research and Development  
 Administration, Division of Transportation  
 Energy Conservation  
 KEYWORDS: ELECTRIC VEHICLES; HYBRID  
 ELECTRIC-POWERED VEHICLES; REGENERATIVE  
 BRAKING; HISTORY; RECOVERY; UTILIZATION;  
 FLYWHEELS; POWER TRAIN SYSTEMS; DIAGRAMS;  
 BATTERIES; TABLES (DATA); GRAPHS (CHARTS);  
 COSTS; FEASIBILITY  
 AVAILABILITY: NTIS

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 Davis, D.D.; Renner, R.A.; Younger, P.C.; Epps,

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 ADDRESS: University of California, Livermore, CA  
 94550  
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 Energy Conservation  
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 TECHNOLOGY; ELECTRIC VEHICLES; REGENERATIVE  
 BRAKING; HISTORY; DEVELOPMENT; TESTING;  
 TRANSPORTATION; COST ANALYSIS; TABLES (DATA);  
 PATENTS; HYBRID ELECTRIC-POWERED VEHICLES;  
 ENERGY CONSERVATION; BATTERIES  
 AVAILABILITY: NTIS

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 Davis, F.W.; Burkhalter, D.A.  
 TITLE: Vanpooling Institutional Barriers

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 SPONSOR: U.S. Dept. of Energy, Assistant  
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 Applications, Transportation Programs Office  
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 VANPOOLS; LIABILITIES; INSURANCE; TAXES;  
 OPERATION; GOVERNMENT POLICIES; LEGAL  
 ASPECTS; STATE ANALYSIS  
 AVAILABILITY: GPO, Stock No. 061-000-00085-2

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 Davis, F.W., Jr.; Oen, K.  
 Tennessee, University of, Transportation Center  
 ADDRESS: Knoxville, TN 37916  
 TITLE: Solving Public Passenger Transportation  
 Problems: A Need for Policy Reorientation.  
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 SPONSOR: U.S. Dept. of Transportation, Office of  
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 KEYWORDS: PASSENGER TRANSPORTATION; URBAN  
 TRANSPORTATION; DEVELOPMENT; GOVERNMENT  
 POLICIES; TAXICABS; BUSES (VEHICLES);  
 AUTOMOTIVE FLEETS; PUBLIC TRANSPORTATION;  
 CONSUMERS  
 AVAILABILITY: NTIS

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 Dayman, B., Jr.  
 California Institute of Technology, Jet  
 Propulsion Laboratory  
 ADDRESS: Pasadena, CA  
 TITLE: Realistic Effects of Winds on the  
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Paper No. 780337, presented at the Society of  
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 Exposition, Cobo Hall, Detroit, Michigan,  
 February 27 - March 3, 1978, 20 p.

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 KEYWORDS: AERODYNAMICS; WIND; FUEL ECONOMY;  
 AUTOMOBILES; FUEL CONSUMPTION; VELOCITY;  
 COMPUTER PROGRAMS; TABLES (DATA)  
 AVAILABILITY: Society of Automotive Engineers  
 Inc., 400 Commonwealth Drive, Warrendale, PA  
 15096 2.50

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Demetsky, M.J.; Noel, L.A.; Virkler, M.R.  
Virginia, University of, Dept. of Civil  
Engineering  
ADDRESS: Charlottesville, VA 22901  
TITLE: Methodology for the Design of Urban  
Transportation Interface Facilities

Final Report, Report No. PB-269956,  
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SPONSOR: U.S. Dept. of Transportation, Office of  
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KEYWORDS: DESIGN; URBAN TRANSPORTATION; MASS  
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AVAILABILITY: NTIS

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Dennis, A.W.; Foley, J.T., Jr.; Hartman, W.P.;  
Larson, D.W.  
Sandia Laboratories  
ADDRESS: Albuquerque, NM 87185  
TITLE: Severities of Transportation Accidents  
Involving Large Packages

Report No. SAND77-0001, v.p.  
1978, May  
SPONSOR: U.S. Dept. of Energy, Division of  
Environmental Technology  
KEYWORDS: TRANSPORTATION; ACCIDENTS; CONTAINERS;  
HAZARDS; FIRE; RAIL TRANSPORTATION; TRUCKS;  
AUTOMOBILES; WEIGHT; TABLES (DATA)  
AVAILABILITY: NTIS

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Deosaran, G.; Sweeney, H.; Van Duzee, R.  
Systems Analysis and Research Corp.; U.S. Dept.  
of Transportation, Federal Aviation  
Administration  
ADDRESS: SARC, 1801 K Street NW, Washington, DC;  
USDOT/FAA, 800 Independence Avenue SW,  
Washington, DC 20006  
TITLE: Forecasts of Computer Airlines Activity

Report No. FAA-RP-77-28, 139 p.  
1977, July  
SPONSOR: U.S. Dept. of Transportation, Federal  
Aviation Administration, Office of Aviation  
Policy  
KEYWORDS: AVIATION; AIR TRANSPORTATION; PASSENGER  
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REGIONAL ANALYSIS; MODELS; REVENUE; HISTORY;  
TABLES (DATA); AIRPORTS; STATISTICS; GROWTH;  
PUERTO RICO; PASSENGER EMPLACEMENTS  
AVAILABILITY: NTIS

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DeBeard, L.W.  
General Motors Corp.  
ADDRESS: Detroit, MI  
TITLE: The Influence of Road Surface Texture on  
Tire Rolling Resistance

Paper No. 780257, presented at the Society of  
Automotive Engineers' Congress and  
Exposition, Cobo Hall, Detroit, Michigan,  
February 27 - March 3, 1978, 8 p.  
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KEYWORDS: TIRES; FRICTION; WEAR; ROADS; SURFACES;  
FUEL ECONOMY; TESTING; PERFORMANCE; MATERIALS  
AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096 \$2.50

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DeWolf, J.B.; Davis, C.; Heinemann, P.C.  
Charles Stark Draper Laboratory Inc.  
ADDRESS: 68 Albany Street, Cambridge, MA 02139  
TITLE: Computer-Based Resource Accounting Model  
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Report No. DOT-TSC-OST-76-39, 74 p.  
1976, October  
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 Systems Center  
KEYWORDS: MODELS; AUTOMOBILES; TECHNOLOGY  
ASSESSMENT; RESOURCES; MATERIALS; ENERGY  
DEMAND; COMPUTERIZED SIMULATION; INPUT-OUTPUT  
ANALYSIS; LABOR ESTIMATES; CAPITAL; DEMAND  
(ECONOMICS); TABLES (DATA); MANPOWER  
AVAILABILITY: NTIS

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Dickson, E.M.; Ryan, J.W.; Saulyan, M.H.  
Stanford Research Institute  
ADDRESS: Menlo Park, CA 94025  
TITLE: The Hydrogen Energy Economy: A Realistic  
Appraisal of Prospects and Impacts

Praeger Special Studies in U.S. Economic, Social,  
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SPONSOR: National Science Foundation, RANN Program  
KEYWORDS: HYDROGEN; HYDROGEN FUELS; TECHNOLOGY  
ASSESSMENT; FORECASTING; HYDROGEN PRODUCTION;  
HYDROGEN STORAGE; DISTRIBUTION; UTILIZATION;  
SAFETY; COMPARATIVE EVALUATIONS; ECONOMICS;  
COSTS; VEHICLES; AUTOMOTIVE FUELS; ALTERNATE  
FUELS; AVIATION; AIR TRANSPORTATION;  
UTILITIES; AMMONIA; SYNTHESIS; STEEL MAKING  
AVAILABILITY: Praeger Publishers, 200 Park  
Avenue, New York, NY 10017 \$18.50

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Dietz, H.  
Scitran  
ADDRESS: Box 5456, Santa Barbara, CA 93108  
TITLE: Development of Batteries for  
Electrically-Driven Vehicles

Report No. W76-33626, NASA-TT-F-17227, 27 p.:  
Translated from Bosch Technische Berichte,  
2(5), 211-219  
1976, September  
SPONSOR: National Aeronautics and Space  
Administration  
KEYWORDS: BATTERIES; ELECTRIC VEHICLES; FUEL  
CELLS; RESEARCH; PERFORMANCE  
AVAILABILITY: NTIS

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Doersberg, A.  
Brookhaven National Laboratory, National Center  
for Analysis of Energy Systems, Technology  
Assessment Group  
ADDRESS: Upton, NY 11973  
TITLE: Impact of Selected Energy Conservation  
Technologies on Baseline Demands

Report No. BWL-50745, 93 p.  
1977, September  
SPONSOR: U.S. Dept. of Energy  
KEYWORDS: REGIONAL ANALYSIS; ENERGY CONSUMPTION;  
TABLES (DATA); ENERGY CONSERVATION; COST  
EFFECTIVENESS; TECHNOLOGY; STANDARDS; MODELS;  
RESIDENTIAL SECTOR; COMMERCIAL SECTOR;  
FORECASTING; INDUSTRIAL SECTOR; TRANSPORTATION  
AVAILABILITY: NTIS

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Doggett, R.W.; Meyer, R.  
International Research and Technology Corp.  
ADDRESS: 7655 Old Springhouse Road, McLean, VA  
22101

TITLE: The Transportation Energy Conservation  
Network (TECHNET): A Summary Description

Report No. IRT-19900/1, 35 p.

1978, March 14

SPONSOR: Oak Ridge National Laboratory, Energy  
Division, Data Management and Analysis Group  
KEYWORDS: TRANSPORTATION; ENERGY CONSERVATION;  
DEMAND (ECONOMICS); ENERGY CONSUMPTION;  
ENVIRONMENTAL IMPACT; ECONOMIC IMPACT; TABLES  
(DATA); MODELS; GOVERNMENT POLICIES;  
SIMULATION; MATERIALS; TRANSPORTATION

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Doggett, R.W.; Meyer, R.; Heller, M.  
International Research and Technology Corp.  
ADDRESS: 7655 Old Springhouse Rd.; McLean, VA  
22101

TITLE: Ten Scenarios of Transportation Energy  
Conservation Using TECHNET

Report No. IRT-17200/2-R, 107 p.

1978, June

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation, Data  
Analysis Branch  
KEYWORDS: FORECASTING; MODELS; TRANSPORTATION;  
GASOLINE; RATIONING; ENERGY CONSERVATION;  
AUTOMOTIVE ENGINES; BRAYTON CYCLE; STIRLING  
ENGINES; INTERNAL COMBUSTION ENGINES;  
ECONOMIC IMPACT; ENERGY INTENSITY; MARKET;  
ENERGY CONSUMPTION; AUTOMOBILES; GROWTH;  
VEHICLE MILES TRAVELED; GROSS NATIONAL  
PRODUCT; MILEAGE; TABLES (DATA)

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Dohner, A.R.  
General Motors Corp., Research Laboratories  
ADDRESS: Warren, MI  
TITLE: Transient System Optimization of an  
Experimental Engine Control System Over the  
Federal Emissions Driving Schedule

Paper No. 780286, presented at the Society of  
Automotive Engineers' Congress and  
Exposition, Cobo Hall, Detroit, Michigan  
February 27 - March 3, 1978, 20 p.

1978

KEYWORDS: FUEL ECONOMY; AUTOMOTIVE EMISSION  
CONTROL; AUTOMOTIVE ENGINES; FUEL  
CONSUMPTION; DESIGN; TESTING; GRAPHS  
(CHARTS); CATALYTIC CONVERTERS  
AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096 \$2.50

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Donnelly, J.J., Jr.; Roessler, W.U.  
Aerospace Corp., Environment and Energy  
Conservation Division, Mobile Systems Group,  
Office of Energy Conservation  
TITLE: Fuel Consumption and Engine Horsepower  
Projections for the Highway Transportation  
Sector

79 p.

1978, April 28

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation, Office of  
Highway Systems, Heat Engine Systems Branch  
KEYWORDS: FUEL CONSUMPTION; HIGHWAY  
TRANSPORTATION; AUTOMOBILES; TRUCKS; BUSES  
(VEHICLES); MOTORCYCLES; MILEAGE; ENGINES;

SALES; FORECASTING; WEIGHT; CLASSIFICATIONS;  
TABLES (DATA); SIZE; FUEL ECONOMY

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Donovan, Hamster and Mattien Inc.  
ADDRESS: 1055 Thomas Jefferson St., Suite #14,  
Washington, DC 20007  
TITLE: Energy, the Environment and Land Use:  
Literature Review

Report No. UCRL-13710(Pt. 1), 190 p.

1976, November 5

SPONSOR: Lawrence Livermore Laboratory, Office of  
Environmental Policy  
KEYWORDS: BIBLIOGRAPHIES; ENERGY SUPPLIES; COAL;  
NUCLEAR ENERGY; PETROLEUM; NATURAL GAS;  
ALTERNATE FUELS; ELECTRIC POWER GENERATION;  
ENERGY CONSUMPTION; ENERGY CONSERVATION;  
RESIDENTIAL SECTOR; COMMERCIAL SECTOR;  
TRANSPORTATION; AGRICULTURE; LAND USE;  
ENVIRONMENTAL IMPACT  
AVAILABILITY: NTIS

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Donovan, Hamster and Mattien Inc.  
ADDRESS: 1055 Thomas Jefferson St., Suite #14,  
Washington, DC 20007  
TITLE: Energy, the Environment, and Land Use.  
Final Report

Report No. UCRL-13710(Pt. 2), 151 p.

1976, November 5

SPONSOR: Lawrence Livermore Laboratory, Office of  
Environmental Policy  
KEYWORDS: LAND USE; ENVIRONMENTAL IMPACT; ENERGY  
CONSERVATION; ENERGY CONSUMPTION; ENERGY  
DEMAND; POLLUTION; ECONOMIC ANALYSIS; SITE  
SELECTION; COAL; PETROLEUM; TRANSPORTATION;  
PRODUCTION; NUCLEAR ENERGY; WASTE DISPOSAL  
AVAILABILITY: NTIS

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Duffy, M.A.; Eiden, G.L.; Hamilton, C.W.; Drago,  
V.J.  
Battelle Columbus Laboratories  
ADDRESS: 505 King Avenue, Columbus, OH 43201  
TITLE: General Aviation Dynamics: An Extension  
of the Cost Impact Study to Include  
Interactions in the Forecasting of General  
Aviation Activity. Volumes I-IV

Report No. FAA-AVR-77-20, v.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; OPERATION  
AVAILABILITY: NTIS

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Dupree, W.G., Jr.  
U.S. Dept. of Interior, Bureau of Mines, Division  
of Interfuels Studies  
ADDRESS: Washington, DC 20241  
TITLE: Energy Consumption in the Transportation  
Sector

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Transportation Systems," held at Union College, Schenectady, New York, on August 1-5, 1977, 41 p.

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KEYWORDS: ENERGY CONSUMPTION; TRANSPORTATION; PETROLEUM; PETROLEUM PRODUCTS; LIQUEFIED PETROLEUM GASES; JET ENGINE FUELS; GASOLINE; DISTILLATES; FUEL OIL; RESIDUAL OILS; TABLES (DATA); GRAPHS (CHARTS); REGIONAL ANALYSIS

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Dustin, M.O.; Denington, R.J.  
National Aeronautics and Space Administration,  
Lewis Research Center

ADDRESS: Cleveland, OH 44135

TITLE: Test and Evaluation of 23 Electric Vehicles for State-of-the-Art Assessment

Report No. COMS/1011-21, NASA TM-73850, paper presented at the 1978 SAE Congress, Detroit, Michigan, February 27 - March 3, 1978, 24 p.

1978

SPONSOR: U.S. Dept. of Energy, Division of Transportation Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; TESTING; HYBRID ELECTRIC-POWERED VEHICLES; REGENERATIVE BRAKING; ENERGY CONSUMPTION; TABLES (DATA); GRAPHS (CHARTS); FUEL CONSUMPTION; PERFORMANCE

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Ebersole, W.; Rubin, D.; Darling, E.; Englander, I.; Frenkel, L.; Meyerhoff, M.; Prerau, D.; Schaeffer, R.R.; Morrison, J.

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.

1975, July

SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Policy, Plans and International Affairs, Office of Transportation Energy Policy

KEYWORDS: ENERGY CONSERVATION; LEGISLATION; SAFETY; TRAVEL; DAYLIGHT SAVING TIME; TRANSPORTATION; ELECTRIC POWER; PUBLIC OPINION; CRIME; GOVERNMENT POLICIES; ACCIDENTS; TABLES (DATA)

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Ecklund, E.E.

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

Report No. HCP/W1737-01, v.p.

1975, May

KEYWORDS: ALTERNATE FUELS; AUTOMOTIVE ENGINES; ETHANOL; METHANOL; GASOLINE; PERFORMANCE; COMPARATIVE EVALUATIONS; FUEL-AIR RATIO; FUEL ECONOMY; AUTOMOTIVE EMISSIONS; TESTING; GRAPHS (CHARTS); DRIVING CYCLE  
AVAILABILITY: GPO, Stock No. 061-000-00074-7

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Energy and Environmental Analysis Inc.

ADDRESS: 1701 North Fort Myer Drive, Arlington,

VA 22209

TITLE: End Use Energy Consumption Data Base: Series 1 Tables

Report No. PB-281817, DOE/EIA-0014, 206 p.

1978, June

SPONSOR: U.S. Dept. of Energy, Energy Information Administration, Office of Energy Data  
KEYWORDS: ENERGY CONSUMPTION; ECONOMIC ANALYSIS; INDUSTRIES; DATA BASES; FUELS; INDUSTRIAL SECTOR; MANUFACTURING; MINING; PAPER INDUSTRY; TEXTILE INDUSTRY; AGRICULTURE; RESIDENTIAL SECTOR; ELECTRIC UTILITIES; COMMERCIAL SECTOR; HOUSING; STATISTICS; INCOME; REGIONAL ANALYSIS; TRANSPORTATION; AUTOMOBILES; AIR TRANSPORTATION; WATER TRANSPORTATION; TABLES (DATA); BUSES (VEHICLES); STATE ANALYSIS  
AVAILABILITY: NTIS

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ADDRESS: Washington, DC

TITLE: Proceedings of the Third International Electric Vehicle Symposium. Volumes 1 and 2

Report No. CONF-740215, proceedings of conference held February 19-21, 1974, Washington, DC, v.p.

1974

SPONSOR: Electric Vehicle Council

KEYWORDS: ELECTRIC VEHICLES; RESEARCH; BATTERIES; DRIVE TRAIN SYSTEMS; ELECTRIC POWER DEMAND; 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 ANALYSIS; DIAGRAMS; PHOTOGRAPHS  
AVAILABILITY: NTIS

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ADDRESS: Washington, DC 20545

TITLE: Bibliography Energy Extension Service

Report No. TIC/EES/BIB-1, 120 p.

1977, April

KEYWORDS: BIBLIOGRAPHIES; ENERGY CONSERVATION; SOLAR ENERGY; ENERGY CONSUMPTION; BUILDINGS; BEHAVIOR; ENERGY POLICY; ECONOMICS; WASTE PROCESSING; ENERGY DEMAND; ENERGY SHORTAGES; ENERGY RESOURCES; FOSSIL FUELS; AGRICULTURE; HOUSES; INDUSTRIES; TRANSPORTATION

AVAILABILITY: U.S. Dept. of Energy, Technical Information Center, P.O. Box 62, Oak Ridge, TN 37830

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ADDRESS: Washington, DC

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KEYWORDS: ELECTRIC VEHICLES; TESTING; HYBRID ELECTRIC-POWERED VEHICLES; US ERDA; VELOCITY; GRAPHS (CHARTS); PHOTOGRAPHS; RESEARCH; PERFORMANCE

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Energy Research and Development Administration,  
Office of Assistant Administrator for  
Environment and Safety; Energy Research and  
Development Administration, Office of  
Assistant Administrator for Conservation  
ADDRESS: Washington, DC  
TITLE: Environmental Development Plan: Electric  
Vehicle Systems, FY 1978

Report No. EDP/C-01(77), 118 p.

1977, August

KEYWORDS: ELECTRIC VEHICLES; BATTERIES; US DOE;  
ENVIRONMENTAL IMPACT; RESEARCH; ELECTRIC  
POWER DEMAND; HEALTH; SAFETY; SOCIO-ECONOMIC  
FACTORS; AIR QUALITY; NOISE POLLUTION  
AVAILABILITY: NTIS

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Engelen, R.E.

Barton-Aschman Associates Inc.

TITLE: Joint Development: Institutional  
Constraints and Potentials

Paper presented at the 54th Annual Meeting of the  
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1976

SPONSOR: National Academy of Sciences,  
Transportation Research Board

KEYWORDS: LAND USE; TRANSPORTATION SYSTEMS;  
PLANNING; GOVERNMENT POLICIES; FUNDING;  
LEGISLATION; INCENTIVES

AVAILABILITY: National Academy of Sciences,  
Transportation Research Board, 2101  
Constitution Ave. NW, Washington, DC 20418  
\$6.00 for Transportation Research Record No.  
565

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Englehart, J.E.

Ford Motor Co.

ADDRESS: Detroit, MI

TITLE: The Origin and Uses of the Economy Van

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Exposition, Cobo Hall, Detroit, Michigan,  
February 27 - March 3, 1978, 12 p.

1978

KEYWORDS: VANS; HISTORY; UTILIZATION;  
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AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096 \$2.50

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Erlbaum, W.S.

New York State Dept. of Transportation, Planning  
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ADDRESS: Albany, NY

TITLE: Gasoline Demand by Owner Characteristics

Report presented at the 54th Annual Meeting of  
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in "Transportation Energy Conservation and  
Demand," Transportation Research Record 561,  
37-44

1976

KEYWORDS: GASOLINE; DEMAND (ECONOMICS);  
OWNERSHIP; OWNERS; NEW YORK; AUTOMOBILES;  
RATIONING; ALLOCATIONS; FUEL CONSUMPTION;  
SIZE; AGE GROUPS; MILEAGE; SET;  
SOCIO-ECONOMIC FACTORS

AVAILABILITY: National Academy of Sciences,  
Transportation Research Board, 2101  
Constitution Ave. NW, Washington, DC 20418  
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Erlbaum, W.S.; Hartgen, D.T.; Cohen, G.S.  
New York State Dept. of Transportation, Planning  
Division, Planning Research Unit

ADDRESS: Albany, NY 12232

TITLE: Automotive Energy Forecasts: Impact of  
Price, Availability, and Efficiency

Preliminary Research Report 133, 99 p.

1977, December

KEYWORDS: NEW YORK; FUEL CONSUMPTION; VEHICLE  
MILES TRAVELED; EMPLOYMENT; FUEL ECONOMY;  
GASOLINE; PRICES; SOCIO-ECONOMIC FACTORS;  
FORECASTING; MODELS; AUTOMOBILES; REGIONAL  
ANALYSIS; TABLES (DATA); POPULATION  
(STATISTICS); AUTOMOBILE REGISTRATIONS

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Erlbaum, W.S.; Trentacoste, H.P.; Knighton, R.G.;  
Slavick, S.R.

New York State Dept. of Transportation, Planning  
and Research Bureau, Planning Research Unit

ADDRESS: Albany, NY 12232

TITLE: New York State Intercity Travel Data,  
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Report No. DOT/SPRD/DPE/50-77-6, Volume 2 of 3,  
40 p.

1977, May

SPONSOR: U.S. Dept. of Transportation, Office of  
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KEYWORDS: INTERCITY TRANSPORTATION;  
TRANSPORTATION; NEW YORK; TRAVEL; DATA BASES;  
STATISTICS; AIR TRANSPORTATION; AUTOMOBILES;  
BUSES (VEHICLES); RAIL TRANSPORTATION;  
SERVICES; TABLES (DATA)

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ESB Inc.

ADDRESS: 5 Penn Center Plaza, Philadelphia, PA  
19103

TITLE: Cost and Design Study to Develop Lead-Acid  
Batteries for Electric Vehicle Propulsion.  
Volume 1

Report No. ANL-K-77-3621-1, 441 p.

1977

SPONSOR: Argonne National Laboratory

KEYWORDS: BATTERIES; ELECTRIC VEHICLES; LEAD-ACID  
BATTERIES; COSTS; DESIGN; DIAGRAMS; RESEARCH;  
MARKET

AVAILABILITY: NTIS

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Esposito, V.J.

U.S. Dept. of Energy

ADDRESS: Washington, DC

TITLE: Overview of Electric Vehicles in the  
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Exposition, Cobo Hall, Detroit, Michigan,  
February 27 - March 3, 1978, 8 p.

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PERFORMANCE; STANDARDS

AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
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Ethyl Corp.  
ADDRESS: 330 South Fourth Street, Richmond, VA  
23219  
TITLE: Emissions and Fuel Economy of the  
Turbulent Flow System for European 4-Cyl  
Engines  
Paper No. 760856, published in SAE SP-411, 33-52  
1976, August  
SPONSOR: Society of Automotive Engineers,  
Milwaukee Section  
KEYWORDS: FUEL ECONOMY; AUTOMOTIVE EMISSIONS;  
STANDARDS; AUTOMOTIVE FUELS; AUTOMOTIVE  
ENGINES; DESIGN; TESTING; GRAPHS (CHARTS);  
AUTOMOTIVE TRANSMISSIONS; VELOCITY; TABLES  
(DATA)  
AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
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Evans, L.  
General Motors Corp., Research Laboratories  
ADDRESS: Warren, MI 48090  
TITLE: Exhaust Emissions, Fuel Consumption and  
Traffic: Relations Derived from Urban  
Driving Schedule Data  
Research Publication GMR-2599, 35 p.  
1977, December 7  
KEYWORDS: AUTOMOTIVE EMISSIONS; FUEL CONSUMPTION;  
TRAFFIC; URBAN TRANSPORTATION; VELOCITY;  
TRAVEL TIME; VEHICLE TRIPS; HYDROCARBONS;  
CARBON MONOXIDE; NITROGEN OXIDES; TABLES  
(DATA); GRAPHS (CHARTS)

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Evans, L.; Herman, R.; Lam, T.W.  
General Motors Corp., Research Laboratories  
TITLE: Gasoline Consumption in Urban Traffic

Paper No. 760048, presented at the Automotive  
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Michigan, February 23-27, 1976, 8 p.  
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SPONSOR: Society of Automotive Engineers  
KEYWORDS: TRAFFIC; URBAN TRANSPORTATION; FUEL  
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REGRESSION ANALYSIS; VEHICLE TRIPS; VELOCITY  
AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
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Executive Office of the President  
ADDRESS: Washington, DC  
TITLE: Economic Report of the President Together  
with the Annual Report of the Council of  
Economic Advisors Transmitted to the Congress  
January 1978  
Annual report, 384 p.  
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KEYWORDS: ECONOMICS; ECONOMIC POLICY; GOVERNMENT  
POLICIES; INTERNATIONAL RELATIONS; INFLATION;  
UNEMPLOYMENT; EMPLOYMENT; PRODUCTION; TABLES  
(DATA); STATISTICS  
AVAILABILITY: GPO, Stock No. 040-000-00389-4

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Executive Office of the President, Office of  
Management and Budget  
ADDRESS: Washington, DC 20503

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TITLE: The United States Budget in Brief - Fiscal  
Year 1978

84 p.  
1977, January 17  
KEYWORDS: BUDGETS; FORECASTING; ECONOMIC POLICY;  
GOVERNMENT POLICIES; ENERGY POLICY; TAXES;  
TABLES (DATA)  
AVAILABILITY: GPO, Stock No. 041-001-00133-6

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Bison Research and Engineering Co., Government  
Research Laboratories; Science Application  
Inc., Combustion and Propulsion Technology  
Division  
ADDRESS: ERBE, P.O. Box 8, Linden, NJ 07036;  
SAI, 20335 Ventura Boulevard, Suite 423,  
Woodland Hills, CA 91364  
TITLE: Fundamental Characterization of Alternate  
Fuel Effects in Continuous Combustion Systems

Report No. TID-28463, Technical Progress Report  
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SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: ALTERNATE FUELS; COMBUSTION; CHEMICAL  
PROPERTIES; MODELS; COMBUSTION PROPERTIES;  
MODELS; GAS TURBINE ENGINES; HYDROGEN;  
NITROGEN; THERMODYNAMIC PROPERTIES; TURBULENT  
FLOW; DROPLETS; SPRAYS; DECOMPOSITION;  
OXIDATION; GRAPHS (CHARTS)  
AVAILABILITY: NTIS

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Fairweather, R.G.  
Perkins Engines Co.  
ADDRESS: United Kingdom  
TITLE: Gas Emissions and Fuel Economy of the  
Light Duty Diesel Truck

Paper No. 770256, presented at the Society of  
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February 28-March 4, 1977, 12 p.  
1977  
SPONSOR: Society of Automotive Engineers  
KEYWORDS: COMPUTERIZED SIMULATION; TRUCKS; DIESEL  
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MONOXIDE; NITROGEN DIOXIDE; HYDROCARBONS;  
GRAPHS (CHARTS); FUEL ECONOMY; TESTING; WEIGHT  
AVAILABILITY: Society of Automotive Engineers,  
Inc., 400 Commonwealth Drive, Warrendale, PA  
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Faucett (Jack) Associates Inc.  
ADDRESS: 5454 Wisconsin Avenue, Chevy Chase, MD  
20015  
TITLE: Update to the National Energy Accounts:  
Energy Flows in the U.S., 1973 and 1974.  
Volume II. Program Documentation

Final report, Report No. JACKFAU-77-176-2, v.p.  
1977, September  
SPONSOR: Federal Energy Administration  
KEYWORDS: ENERGY FLOW; TABLES (DATA); COMPUTER  
PROGRAMS

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ADDRESS: 5454 Wisconsin Avenue, Chevy Chase, MD  
20015  
TITLE: Update to the National Energy Accounts:

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SPONSOR: Federal Energy Administration, Office of  
Energy Systems Data

KEYWORDS: ENERGY SUPPLIES; PRODUCTION; IMPORTS;  
PRICES; ENERGY CONSUMPTION; MANUFACTURING;  
INDUSTRIAL SECTOR; MINING; TRANSPORTATION;  
AGRICULTURE; CONSTRUCTION; UTILITIES;  
COMMERCIAL SECTOR; EXPORTS; ENERGY  
CONVERSION; ENERGY FLOW; ELECTRIC POWER  
DEMAND; TABLES (DATA); RESIDENTIAL SECTOR;  
NATURAL GAS; FUEL OIL; FOSSIL FUELS

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Fazzolare, R.A. (ed.); Smith, C.B. (ed.)  
Interdisciplinary Group for Ecology, Development,  
and Energy (EDGE); Arizona, University of,  
Dept. of Engineering, Energy Systems  
Engineering Program

ADDRESS: EDEN, P.O. Box 64369, Los Angeles, CA  
90064; UA, Tucson, AR 85721

TITLE: Energy Use Management: Proceedings of the  
International Conference. Volumes I and II

Conference held at Tucson, Arizona, October  
24-28, 1977, 1033 p. for Volume I, 734 p. for  
Volume II

1977

KEYWORDS: TRANSPORTATION; AUTOMOBILES; FUEL  
ECONOMY; ELECTRIC VEHICLES; HYBRID  
ELECTRIC-POWERED VEHICLES; VEHICLES; URBAN  
TRANSPORTATION; PUBLIC TRANSPORTATION;  
INTERCITY TRANSPORTATION; CARGO  
TRANSPORTATION; RAIL TRANSPORTATION;  
PIPELINES; TELECOMMUNICATION; AGRICULTURE;  
LIVESTOCK; PRODUCTION; FOOD INDUSTRY; OPEC;  
DEVELOPING COUNTRIES; NUCLEAR ENERGY; ENERGY  
SUPPLIES; LAND USE; TECHNOLOGY; ENERGY  
CONSERVATION; ENERGY MANAGEMENT; ECONOMICS;  
ENERGY DEMAND; UNCONVENTIONAL ENERGY SOURCES;  
ACCOUNTING; INDUSTRIAL SECTOR; ENERGY  
CONSUMPTION; PERFORMANCE; DESIGN; WASTE HEAT;  
HEAT RECOVERY; NATURAL GAS; COAL; LOAD  
MANAGEMENT; ELECTRIC POWER; INDUSTRIES;  
COMMERCIAL SECTOR; AIR CONDITIONING; SPACE  
HEATING; BUILDINGS; STANDARDS; CONSTRUCTION;  
COMPUTERIZED SIMULATION; OPERATION;  
RESIDENTIAL SECTOR; HUMAN COMFORT;  
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AVAILABILITY: Pergamon Press, Maxwell House,  
Fairview Park, Elmsford, New York, NY 10523

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Federal Energy Administration, Office of Energy  
Conservation and Environment, Marketing Office

ADDRESS: Washington, DC 20461  
TITLE: Consumers' Attitudes, Knowledge, and  
Behavior Regarding Energy Conservation

Report No. FEA/D-76/469, 200 p.

1976, December

KEYWORDS: CONSUMERS; ATTITUDES; BEHAVIOR; ENERGY  
CONSERVATION; SURVEYS; GASOLINE; NATURAL GAS;  
TRANSPORTATION; RESIDENTIAL SECTOR; TABLES  
(DATA); INFORMATION; HOUSES; SPACE HEATING;  
AUTOMOBILES

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Information and Analysis, Office of Data and  
Analysis

ADDRESS: Washington, DC 20461

TITLE: Project Independence Evaluation System  
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Econometric Demand Model

Volume 2 of 15 volumes, Report No. PB-265822,  
FEA/W-76/412, 47 p.

1976, September

KEYWORDS: ENERGY DEMAND; PROJECT INDEPENDENCE;  
ECONOMETRIC MODELS; PETROLEUM PRODUCTS;  
NATURAL GAS; ELECTRIC POWER; COAL;  
RESIDENTIAL SECTOR; COMMERCIAL SECTOR;  
INDUSTRIAL SECTOR; TRANSPORTATION;  
SIMULATION; ENERGY MODELS; TABLES (DATA)

AVAILABILITY: NTIS

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Federal Energy Administration, Office of Energy  
Information and Analysis, Office of Data and  
Analysis

ADDRESS: Washington, DC 20461

TITLE: Project Independence Evaluation System  
(PIES) Documentation. Volume 14. A User's  
Guide

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FEA/W-77/115, 72 p.

1977, June

KEYWORDS: FORECASTING; MODELS; COMPUTER PROGRAMS;  
DATA BASES; ALTERNATE FUELS; COMPARATIVE  
EVALUATIONS; PROJECT INDEPENDENCE; US FEA;  
ENERGY DEMAND; ENERGY SUPPLIES; PETROLEUM;  
NATURAL GAS; COAL; ELECTRIC UTILITIES;  
ECONOMICS; TRANSPORTATION

AVAILABILITY: NTIS

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Analysis; ICF Inc.

ADDRESS: FEA, Washington, DC; ICF, 1990 M Street  
NW, Suite 400, Washington, DC 20461

TITLE: Project Independence Evaluation System  
(PIES) Documentation. Volume 6.  
Methodology for Improving the Price  
Sensitivity of the PIES Oil and Gas Supply  
Curves

Volume 6 of 15 volumes, Report No. PB-264069,  
FEA/W-76/416, 44 p.

1976, September

KEYWORDS: PROJECT INDEPENDENCE; PRICES;  
PETROLEUM; NATURAL GAS; SUPPLY (ECONOMICS);  
ENERGY MODELS; RESERVES; GEOLOGY; ECONOMIC  
MODELS; ENERGY SUPPLIES

AVAILABILITY: NTIS

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Federal Energy Administration, Office of Energy  
Information and Analysis, Office of Data and  
Analysis; ICF Inc.

ADDRESS: FEA, Washington, DC; ICF, 1990 M Street,  
NW, Suite 400, Washington, DC 20036

TITLE: Project Independence Evaluation System  
(PIES) Documentation. Volume 8.  
Methodology for Enabling the PIES Oil and Gas  
Supply Curves to Respond to Non-Constant  
Prices

Volume 8 of 15 volumes, Report No. PB-265086,  
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1976, September

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ENERGY SUPPLIES; INVESTMENTS

AVAILABILITY: NTIS

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Federal Energy Administration, Office of Energy Information and Analysis, Office of Data and Analysis; ICF Inc.  
 ADDRESS: FEA, Washington, DC; ICF, 1990 M Street, N.W., Suite 400, Washington, DC 20036  
 TITLE: Project Independence Evaluation System (PIES) Documentation. Volume 9. Allocation of Petroleum Activity to Oil and Natural Gas in the FEA Oil and Gas Supply Model

Volume 9 of 15 volumes, Report No. PB-265772, FEA/N-76/419, 68 p.

1976, September

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AVAILABILITY: NTIS

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Federal Energy Administration, Office of Energy Information and Analysis, Office of Data and Analysis; ICF Inc.  
 ADDRESS: FEA, Washington, DC; ICF, 1990 M Street, N.W., Suite 400, Washington, DC 20036  
 TITLE: Project Independence Evaluation System (PIES) Documentation. Volume 13. Coal and Electric Utility Conventions for PIES

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1976, September

KEYWORDS: COAL; COAL MINES; FORECASTING; ELECTRIC UTILITIES; ENERGY MODELS; PROJECT INDEPENDENCE; CAPACITY; PRICES; SUPPLY (ECONOMICS); TABLES (DATA)

AVAILABILITY: NTIS

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Volume 1 of 15 volumes, Report No. PB-263020, FEA/N-76/411, 432 p.

1976, September

KEYWORDS: MODELS; ENERGY POLICY; FORECASTING; FOSSIL FUELS; PROJECT INDEPENDENCE; ENERGY DEMAND; ENERGY SUPPLIES; COAL; PETROLEUM; NATURAL GAS; PRODUCTION; REFINERIES; ELECTRIC UTILITIES; SYNTHETIC FUELS; TRANSPORTATION; RAIL TRANSPORTATION; BARGES; PIPELINE TRANSPORTATION; ELECTRIC POWER; PRICES; TABLES (DATA); ENERGY CONSERVATION

AVAILABILITY: NTIS

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1977, September

KEYWORDS: ENERGY POLICY; GASOLINE; PETROLEUM; PRICES; ALLOCATIONS; REGULATIONS; TABLES (DATA); GRAPHS (CHARTS); SALES; MARKET; DEMAND (ECONOMICS); SUPPLY (ECONOMICS);

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CONSUMER PRICE INDEX; ECONOMIC IMPACT; HISTORY; PETROLEUM REFINERIES; CAPACITY AVAILABILITY: GPO

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 ADDRESS: Washington, DC  
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556 p.

1976, August

KEYWORDS: NATURAL GAS; PIPELINE TRANSPORTATION; ENERGY SUPPLIES; SHIPMENTS; INTERSTATE TRANSPORTATION; TABLES (DATA); MARKET; STATE ANALYSIS; ENERGY CONSUMPTION; REGIONAL ANALYSIS; GAS INDUSTRY; GAS FLOW

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 ADDRESS: Princeton, NJ  
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1977, August

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 TITLE: Wall Quench and Flammability Limit Effects on Exhaust Hydrocarbon Emission. Final Report, Phase 2, October 1, 1976 - September 30, 1977

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 KEYWORDS: AUTOMOTIVE ENGINEERING; TECHNOLOGY; SPARK IGNITION ENGINES; INTERNAL COMBUSTION ENGINES; STANDARDS; AUTOMOTIVE EMISSIONS; HYDROCARBONS; COMBUSTION; HEAT LOSS; TESTING; MODELS; DIAGRAMS

AVAILABILITY: NTIS

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 ADDRESS: 1221 Avenue of the Americas, New York, NY 10020  
 TITLE: Fleet Owner Marketing Handbook, Number Four

32 p.

1977

KEYWORDS: AUTOMOTIVE FLEETS; MARKETING; HANDBOOKS; OWNERS; MARKET; TRUCKS; VEHICLES; REGIONAL ANALYSIS; BUSES (VEHICLES); URBAN AREAS; SALES; FORECASTING; STATISTICS; TABLES (DATA); GRAPHS (CHARTS); VEHICLE REGISTRATIONS

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KEYWORDS: TABLES (DATA); GRAPHS (CHARTS); FUEL  
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AVAILABILITY: NTIS

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1977, June

KEYWORDS: FLORIDA; GASOLINE; CONSUMPTION; STATE  
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KEYWORDS: TRANSPORTATION; MEASUREMENT; CARGO  
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ADDRESS: Washington, DC 20590

TITLE: Recreational Vehicles: A Subject  
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1977, July

KEYWORDS: BIBLIOGRAPHIES; RECREATION VEHICLES;  
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AVAILABILITY: NTIS

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ADDRESS: Washington, DC 20590

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KEYWORDS: BIBLIOGRAPHIES; ABSTRACTS; VEHICLES;  
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TRANSPORTATION  
AVAILABILITY: NTIS

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ADDRESS: MC, San Francisco, CA

TITLE: A New Direction for the Highway Program

Report presented at the 54th Annual Meeting of  
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KEYWORDS: HIGHWAYS; CONSTRUCTION; CALIFORNIA;  
STATE GOVERNMENT; PLANNING; SAFETY; OPERATING  
COSTS; FINANCING; GRAPHS (CHARTS);  
FORECASTING; MANAGEMENT

AVAILABILITY: National Academy of Sciences,  
Transportation Research Board, 2101  
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SPONSOR: National Academy of Sciences, National  
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KEYWORDS: WALKING; SURVEYS; DISTANCE; TABLES  
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AVAILABILITY: National Academy of Sciences,  
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Foster, R.W.

Miami, University of, Ryder Program in  
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TITLE: Alternative Fuels and Intercity Trucking

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INTERNAL COMBUSTION ENGINES; FUEL  
CONSUMPTION; HIGHWAY TRANSPORTATION;  
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COMMERCIALIZATION; DESIGN; DEMONSTRATION;  
TABLES (DATA); DIAGRAMS

AVAILABILITY: NTIS

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ADDRESS: St. Johns, MI

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ALTERNATE FUELS; FEASIBILITY; LOCOMOTIVES;  
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AVAILABILITY: NTIS

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1977, February

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SPACE HEATING; HOT WATER HEATING; AIR  
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PETROLEUM; COAL; SOLAR SPACE HEATING; HEAT  
PUMPS; ANNUAL CYCLE ENERGY SYSTEM; STEAM;  
ELECTRIC POWER; AUTOMOBILES; ELECTRIC  
VEHICLES; TRANSPORTATION; INPUT-OUTPUT  
ANALYSIS; TABLES (DATA); NUCLEAR ENERGY;  
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INDUSTRIAL SECTOR

AVAILABILITY: NTIS

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Praize, W.E.

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AVAILABILITY: NTIS

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ADDRESS: Chestnut Hill, MA

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Board, National Cooperative Highway Research  
Program; American Association of State  
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AdministrationKEYWORDS: TRANSPORTATION; TRAVEL; BEHAVIOR;  
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ATTITUDES; ENVIRONMENTAL FACTORS

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SOUTHWESTERN STATES; ROCKY MOUNTAINS;  
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MIGRATION; EARNINGS; TABLES (DATA); STATE  
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FEEDSTOCKS; RAW MATERIALS; RESIDENTIAL  
SECTOR; COMMERCIAL SECTOR; INDUSTRIAL SECTOR;  
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ANALYSIS; TABLES (DATA); GRAPHS (CHARTS)

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ADDRESS: Palo Alto, CA

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ADDRESS: University Park, PA 16802

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DEVELOPMENT; MOBILITY; SOCIO-ECONOMIC  
FACTORS; PLANNING; ENVIRONMENTAL IMPACT;  
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TRANSPORTATION; WATER TRANSPORTATION;  
PIPELINE TRANSPORTATION; PETROLEUM; NATURAL  
GAS; GRAPHS (CHARTS); TABLES (DATA); REVENUE;  
COSTS; STATISTICS; TRANSPORTATION; ENERGY  
CONSUMPTION; PERFORMANCE; ENERGY DEMAND;  
GASOLINE; INTERCITY TRANSPORTATION; PRICES;  
EARNINGS; INVENTORIES; FINANCIAL DATA;  
MANPOWER

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ADDRESS: Kendall Square, Cambridge, MA 02142

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INTERCITY TRANSPORTATION; AIR TRANSPORTATION;  
AUTOMOBILES; TRUCKS; BUSES (VEHICLES); RAIL  
TRANSPORTATION; PRICES; EARNINGS;  
INVENTORIES; FINANCIAL DATA; WATER  
TRANSPORTATION; PIPELINE TRANSPORTATION;  
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AVAILABILITY: NTIS

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POLICIES; ENERGY DEMAND; TRANSPORTATION;  
RESIDENTIAL SECTOR; INDUSTRIAL SECTOR;  
COMMERCIAL SECTOR; ENERGY CONVERSION;  
GASOLINE; BUILDINGS; PETROLEUM; NATURAL GAS;  
TAXES; COAL; NUCLEAR ENERGY; UNCONVENTIONAL  
ENERGY SOURCES; RESEARCH

AVAILABILITY: \$1.00

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PERFORMANCE; COSTS; URBAN TRANSPORTATION;  
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AVAILABILITY: NTIS



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ADDRESS: 425 Volker Blvd., Kansas City, MO 64110

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AVAILABILITY: NTIS

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TITLE: Diesel Cars in the United States

72 p.

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AVAILABILITY: NTIS

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Mobil R&amp;D Corp.

ADDRESS: P.O. Box 1025, Princeton, NJ 08540

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AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096 for SAE SP-411

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ADDRESS: Warren, MI 48090

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ADDRESS: Los Angeles, CA

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

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New York State Dept. of Transportation, Planning

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ADDRESS: Albany, NY 12232

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AVAILABILITY: NTIS

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ADDRESS: Kendall Square, Cambridge, MA 02142

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AVAILABILITY: NTIS

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U.S. Environmental Protection Agency; U.S. Dept. of Energy, Assistant Secretary for Conservation and Solar Applications, Transportation Planning Office

ADDRESS: Washington, DC

TITLE: Vanpooling: An Update

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AVAILABILITY: GPO



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TITLE: Employment and Earnings  
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AVAILABILITY: GPO

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ADDRESS: Oak Ridge, TN 37830  
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AVAILABILITY: NTIS

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ADDRESS: Box 55, Saugatuck Station, Westport, CT 06880  
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AVAILABILITY: GPO, Stock No. 061-000-00083-6

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ADDRESS: 6532 E. Halbert Road, Bethesda, MD 20034  
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Hebrew University  
ADDRESS: Jerusalem, Israel  
TITLE: Economic Approach to Value of Time and Transportation Choice

Paper published in Transportation Research Record 587, 1-5  
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KEYWORDS: TRAVEL TIME; TRANSPORTATION; ECONOMIC ANALYSIS; VEHICLE TRIPS; GRAPHS (CHARTS); DISTANCE  
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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Guess, R.H.; Lustenader, E.L.  
General Electric Co.  
ADDRESS: New York, NY  
TITLE: Development of a High Performance and

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AVAILABILITY: Electric Vehicle Council, 90 Park  
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Gulf Research and Development Co.

ADDRESS: Pittsburgh, PA

TITLE: Passenger Car Fuel Economy in Short Trip  
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KEYWORDS: VEHICLE TRIPS; DISTANCE; AUTOMOBILES;  
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AVAILABILITY: GPO, Stock No. 061-000-00112-3

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ADDRESS: Upton, NY 11973

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SPONSOR: U.S. Dept. of Energy

KEYWORDS: COAL; UTILIZATION; FORECASTING; FUEL  
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CAPGO TRANSPORTATION; SLURRY PIPELINES;  
SYNTHETIC FUELS; MARKET; COSTS; PRODUCTION;  
ENERGY SUPPLIES; PETROLEUM; ALLOCATIONS;  
TABLES (DATA)

AVAILABILITY: NTIS

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Haefele, K.

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ADDRESS: Germany

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AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
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TITLE: Methanol: Its Synthesis, Use as a Fuel,  
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AVAILABILITY: NTIS

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Hahn, U.

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ADDRESS: Redwood City, CA 94063

TITLE: Energy Requirement for Electric Road  
Vehicle Propulsion

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AVAILABILITY: NTIS

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Hamilton, W.

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ADDRESS: Santa Barbara, CA 93105

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Administration, Division of Transportation  
Energy Conservation

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BATTERIES; BATTERIES; LITHIUM-ALUMINUM/METAL  
SULFIDE BATTERIES; LEAD-ACID BATTERIES;  
PERFORMANCE; GRAPHS (CHARTS); ENERGY  
CONSUMPTION

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ADDRESS: Santa Barbara, CA 93105

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KEYWORDS: URBAN TRANSPORTATION; FORECASTING;

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 LIFE-CYCLE COST; LOS ANGELES; PHILADELPHIA;  
 SAINT LOUIS (MISSOURI)

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Hamilton, W.  
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 ADDRESS: Santa Barbara, CA  
 TITLE: Basic Requirements for Urban Cars

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 February 27 - March 3, 1978, 12 p.

1978

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 DRIVERS; VEHICLE MILES TRAVELED; VEHICLE  
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 ANGELES; WASHINGTON DC; OWNERSHIP; AGE GROUPS  
 AVAILABILITY: Society of Automotive Engineers  
 Inc., 400 Commonwealth Drive, Warrendale, PA  
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Hamilton, W.; Hagey, G.  
 General Research Corp; Energy Research and  
 Development Administration  
 ADDRESS: GRC, Santa Barbara, CA; ERDA,  
 Washington, DC  
 TITLE: Impacts of Future Use of Electric Cars in  
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 GRAPHS (CHARTS); NICKEL-ZINC BATTERIES;  
 COSTS; TABLES (DATA); AIR POLLUTION; SAINT  
 LOUIS (MISSOURI); PHILADELPHIA; LOS ANGELES;  
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 AVAILABILITY: Electric Vehicle Council, 90 Park  
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Hamilton, W.F.  
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 ADDRESS: P.O. Box 3587, Santa Barbara, CA 93105  
 TITLE: Applicability of Electric Cars

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 AREAS; LOS ANGELES; WASHINGTON DC; TABLES  
 (DATA); GRAPHS (CHARTS); HIGHWAYS; PASSENGER  
 TRANSPORTATION; BATTERIES; BATTERY CHARGING

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 KEYWORDS: TRANSPORTATION; PLANNING; LAND USE;  
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 AVAILABILITY: National Academy of Sciences,  
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 Constitution Ave. NW, Washington, DC 20418  
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Hanson, E.K.  
 General Motors Corp., Buick Motor Division  
 TITLE: An Overall Design Approach to Improving  
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KEYWORDS: FUEL ECONOMY; AUTOMOTIVE ENGINEERING;  
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 REGULATIONS; CONSUMERS; GRAPHS (CHARTS);  
 WEIGHT; MATERIALS  
 AVAILABILITY: Society of Automotive Engineers  
 Inc., 400 Commonwealth Drive, Warrendale, PA  
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Harding, G.G.  
 Lucas (Joseph) Ltd.  
 ADDRESS: United Kingdom  
 TITLE: High Performance Electric Commercial  
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 URBAN TRANSPORTATION  
 AVAILABILITY: Society of Automotive Engineers  
 Inc., 400 Commonwealth Drive, Warrendale, PA  
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Harris, R.G.  
 California, University of, School of Business  
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 ADDRESS: Berkeley, CA  
 TITLE: Economics of Traffic Density in the Rail  
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SPONSOR: Alfred P. Sloan Foundation  
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Hartgen, D.T.  
 New York State Dept. of Transportation, Planning  
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 ADDRESS: Albany, NY 12232  
 TITLE: Ridesharing Behavior: A Review of Recent  
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Nartgen, D.T.; Cohen, G.S.

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

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1977, May

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

KEYWORDS: INTERCITY TRANSPORTATION; PASSENGER TRANSPORTATION; DEMAND (ECONOMICS); MODELS

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Nealy, P.G.; Hertzfeld, H.R.

The Conservation Foundation; U.S. Dept. of Commerce, Bureau of Economic Analysis

ADDRESS: CP, 1717 Massachusetts Ave. NW, Washington, DC 20036; USDOC, Washington DC

TITLE: Energy Conservation Strategies

An Issue Report, 50 p.

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KEYWORDS: ENERGY CONSERVATION; GOVERNMENT POLICIES; PRICES; RATIONING; ALLOCATIONS; REGULATIONS; INCENTIVES; CONSUMERS; EDUCATION; FUEL CONSUMPTION; ECONOMIC IMPACT; AUTOMOBILES; FUEL ECONOMY; STANDARDS; BUILDINGS; THERMAL INSULATION; RETROFITTING; PUBLIC TRANSPORTATION

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ADDRESS: Menlo Park, Edison, N. 08817

TITLE: Durability Testing at One Atmosphere of Advanced Catalysts and Catalyst Supports for Automotive Gas Turbine Engine Combustors. Part 1

Final Report, Report No. CONS/9446-1, NASA CR-135132, 223 p.

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KEYWORDS: TESTING; CATALYSTS; AUTOMOBILES; GAS TURBINE ENGINES; COMBUSTORS; PERFORMANCE; EMISSIONS; PROpane; DIESEL FUELS; AUTOMOTIVE EMISSIONS; LIFE (DURABILITY); TABLES (DATA); GRAPHS (CHARTS)

AVAILABILITY: NTIS

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Neft, R.C.; Borden, C.S. Jet Propulsion Laboratory

ADDRESS: 4800 Oak Grove Drive, Pasadena, CA  
TITLE: Costs and Energy Efficiency of a Dual-Mode System

Report No. N77-29003, NASA-CR-154251, UTA-RD-CA-06-0088-76-2, 76 p.

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

KEYWORDS: ECONOMIC ANALYSIS; ENERGY CONSUMPTION; TRANSPORTATION; PROPULSION; SYSTEMS ANALYSIS; ELECTRIC VEHICLES; LIFE-CYCLE COST; COMPARATIVE EVALUATIONS; OWNERS; HYBRID ELECTRIC-POWERED VEHICLES

AVAILABILITY: NTIS

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Heggie, I.G. (ed.)

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KEYWORDS: ENERGY DEMAND; AIRPORTS; TABLES (DATA); HISTORY; COST ESTIMATES; MAINTENANCE; OPERATING COSTS; ENERGY CONSERVATION; SERVICES; PASSENGER TRANSPORTATION; ECONOMIC ANALYSIS; ELECTRIC RAIL SYSTEMS; AUTOMATED GUIDEWAY TRANSIT

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Melbourne, University of; Australia Commonwealth Bureau of Roads

ADDRESS: Melbourne, Australia

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 ADDRESS: 76 Getty Street, Muskegon, MI 49442  
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 400 Commonwealth Avenue, Warrendale, PA 15096

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 AVAILABILITY: Society of Automotive Engineers  
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 Aerospace Corp., Environment and Energy  
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 Technology, Office of Systems Engineering;  
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ADDRESS: 1755 Massachusetts Avenue NW,  
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ADDRESS: Germany

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Hopkins, J.B.

U.S. Dept. of Transportation, Transportation  
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ADDRESS: Kendall Square, Cambridge, MA 02142

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AVAILABILITY: NTIS

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General Motors Corp., Research Laboratories,  
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ADDRESS: Warren, MI 48090

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 ADDRESS: GMC, Warren, MI 48090; UI, Urbana, IL  
 61801  
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 AVAILABILITY: Westview Press, Boulder, CO

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 Oak Ridge National Laboratory, Information  
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 ADDRESS: P.O. Box Y, Oak Ridge, TN 37830  
 TITLE: Composite Flywheel Development (January 1  
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 AVAILABILITY: NTIS

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 ADDRESS: P.O. Box Y, Oak Ridge, TN 37830  
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 STRESS ANALYSIS  
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 Pittsburgh, University of, Environmental Systems  
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 ADDRESS: Pittsburgh, PA 15260

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ADDRESS: Pittsburgh, PA 15260

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Iberall, A.S.; Cardon, S.Z.

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ADDRESS: 8794 West Chester Pike, Upper Darby, PA 19082

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AVAILABILITY: NTIS

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ADDRESS: 8794 West Center Pike, Upper Darby, PA 19082

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Report No. DOT-TSC-OST-77-37,II, 170 p.

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SPONSOR: U.S. Dept. of Transportation, Transportation Systems Center, Office of Systems Research and Analysis

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Isai, K.

Toyota Motor Co. Ltd.

ADDRESS: Toyota, Japan

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ADDRESS: 1023 Washington Building, Washington, DC

TITLE: World Road Statistics: 1970-1974.

Edition 1975

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

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

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ADDRESS: Washington, DC 20423

TITLE: Freight Commodity Statistics: Motor Carriers of Property, Year Ended December 31, 1974

97 p.

KEYWORDS: COMMODITIES; REGIONAL ANALYSIS; TABLES (DATA); CARGO TRANSPORTATION; REVENUE; TONNAGE; TRUCKS; STATISTICS; WEIGHT

AVAILABILITY: GPO \$1.75, Stock No. 026-000-01054-3, Catalog No. IC 1-MOT22:974

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ADDRESS: Washington, DC

TITLE: Transport Statistics in the United States for the Year Ended December 31, 1975. Part 5: Carriers by Water

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

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



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Companies, and Electric Railways

Annual report, 186 p.  
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REVENUE; EXPENSES; STATISTICS; PASSENGER  
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AVAILABILITY: GPO, Stock No. 026-000-01067-5; See  
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3: Freight Forwarders

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KEYWORDS: CARGO TRANSPORTATION; FINANCIAL DATA;  
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AVAILABILITY: GPO \$0.40, Stock No.  
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ADDRESS: Washington, DC  
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6 p.  
KEYWORDS: STATISTICS; OWNERSHIP; RAIL  
TRANSPORTATION; RAILROAD CARS; REFRIGERATION;  
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AVAILABILITY: GPO \$0.55, Stock No.  
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2: Motor Carriers

24 p.  
KEYWORDS: CARGO TRANSPORTATION; STATISTICS;  
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TRANSPORTATION; FINANCIAL DATA; OPERATION;  
TABLES (DATA); INCOME; EQUIPMENT;  
TRANSPORTATION  
AVAILABILITY: GPO

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Interstate Commerce Commission, Bureau of Accounts  
ADDRESS: Washington, DC 20423  
TITLE: Class I Railroads: Financial and  
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KEYWORDS: RAILROADS; FINANCIAL DATA; STATISTICS;  
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Irick, P.E.; Pascal, E.P.  
National Academy of Sciences, National Research  
Council, Transportation Research Board,  
TRISNET Secretariat  
ADDRESS: 2101 Constitution Ave., Washington, DC  
20590  
TITLE: TRISNET: Directory to Transportation  
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Report No. PB-255172, DOT-TST-76-82, 68 p.  
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Secretary for Systems Development and  
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KEYWORDS: DIRECTORIES; TRANSPORTATION; RAIL  
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60439; ESDA, Washington, DC 20545  
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ADDRESS: 2101 Constitution Avenue NW, Washington,  
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RECYCLING; MATERIALS; MANUFACTURING;  
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TRANSPORTATION; PETROLEUM; CARGO  
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AVAILABILITY: The Conservation Foundation, 1717  
Massachusetts Ave NW, Washington, DC 20036

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Laughlin, Q.B.Q.  
National Governors' Association, Center for  
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ADDRESS: 444 North Capitol Street, Washington, DC  
20001  
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ADDRESS: Upton, NY 11973

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TABLES (DATA); ENERGY CONSUMPTION;

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AVAILABILITY: NTIS

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ADDRESS: Sydney, Australia

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AVAILABILITY: Electric Vehicle Council, 90 Park  
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ADDRESS: 5285 Port Royal Road, Springfield, VA  
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TANKER SHIPS; ABSTRACTS

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Pinegold, J.G.

National Aeronautics and Space Administration,

Jet Propulsion Laboratory

ADDRESS: California Institute of Technology,  
Pasadena, CATITLE: Utilization of Waste Heat in Trucks for  
Increased Fuel Economy. Final Report

Report No. NCP/H1011-02, 30 p.

1978, June

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

KEYWORDS: WASTE HEAT; FUEL ECONOMY; UTILIZATION;

TRUCKS; DIESEL ENGINES; SPARK IGNITION

ENGINES; GAS TURBINE ENGINES; STIRLING

ENGINES; RANKINE CYCLE ENGINES; REGENERATION;

DRIVING CYCLE; ADIABATIC PROCESSES;  
RECUPERATION; TURBOCHARGING;  
TURBOCOMPOUNDING; GRAPHS (CHARTS); TABLES  
(DATA); DIAGRAMS  
AVAILABILITY: GPO, Stock No. 061-000-00111-5

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Leonard, R.W.; Wagner, R.D.

National Aeronautics and Space Administration,

Langley Research Center

ADDRESS: Langley Station, VA

TITLE: Airframe Technology for Energy Efficient  
Transport AircraftPaper No. 760929, presented at the Aerospace  
Engineering and Manufacturing Meeting, Town  
and Country, San Diego, California, November  
29-December 2, 1976, 16 p.

1976

SPONSOR: Society of Automotive Engineers

KEYWORDS: TECHNOLOGY; AIRCRAFT; AERODYNAMICS;

FUEL ECONOMY; EFFICIENCY; TESTING; LAMINAR

FLOW; AIRFOILS; COMPOSITE MATERIALS;

DIAGRAMS; GRAPHS (CHARTS); DESIGN; CONTROL

EQUIPMENT; OPERATING COSTS

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

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Lerman, S.R.

Massachusetts Institute of Technology, Dept. of

Civil Engineering

ADDRESS: Cambridge, MA 02139

TITLE: Location, Housing, Auto Ownership and Mode  
to Work: A Joint Choice ModelPaper presented at the Fifty-Fifth Annual Meeting  
of the Transportation Research Board,  
Washington, DC, 48 p.

1975, August

KEYWORDS: RESIDENTIAL SECTOR; TRANSPORTATION;

SHOPPING TRIPS; MODELS; URBAN AREAS;

BEHAVIOR; EMPLOYMENT; DECISIONS;

SOCIO-ECONOMIC FACTORS; LAND USE;

AUTOMOBILES; OWNERSHIP; HOUSING; DISTANCE;

GRAPHS (CHARTS); COMMUTING

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Lerman, S.R.

Massachusetts Institute of Technology, Dept. of

Civil Engineering

ADDRESS: Cambridge, MA 02139

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Residential Location and Related Household  
DecisionsPaper presented at the annual North American  
Meeting of the Regional Science Association,  
November 7-9, 1975, v.p.

1975, November

KEYWORDS: RESIDENTIAL SECTOR; URBAN

TRANSPORTATION; MODELS; SHOPPING; URBAN

AREAS; BEHAVIOR; EMPLOYMENT; DECISIONS;

SOCIO-ECONOMIC FACTORS; AUTOMOBILES;

OWNERSHIP; HOUSING; GRAPHS (CHARTS); TABLES

(DATA); DISTANCE; COMMUTING; FORECASTING

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Leshner, M.D.; Baisley, W.N.; Leshner, E.

Fuel Injection Development Corp.

ADDRESS: 110 Harding Avenue, Bellawr, NJ 08030

TITLE: A Fuel Vapor Injection/Igniter System.  
Final Report



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Report No. E-4, 84 p.  
1977SPONSOR: Energy Research and Development  
AdministrationKEYWORDS: FUEL INJECTION SYSTEMS; FUEL-AIR RATIO;  
TESTING; AUTOMOTIVE ENGINES; DESIGN; FUEL  
ECONOMY; AUTOMOTIVE EMISSIONS; PERFORMANCE;  
INTERNAL COMBUSTION ENGINES; DIAGRAMS

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Levine, C.A.

Dow Chemical Co.

ADDRESS: Walnut Creek, CA

TITLE: Sodium-Sulfur Battery System: Annual  
Report, May 19, 1975 - May 19, 1976

Report No. CDO-2565-4, 68 p.

1976, November 1

SPONSOR: Energy Research and Development  
Administration, Division of Conservation  
Research and TechnologyKEYWORDS: SODIUM-SULFUR BATTERIES; LIFE  
(DURABILITY); RESEARCH; TECHNOLOGY;  
ELECTROLYTES; ELECTRODES; CATHODES; GRAPHS  
(CHARTS); COSTS  
AVAILABILITY: NTIS

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Levinsohn, R.H.; McQueen, J.T.

U.S. Dept. of Commerce, National Bureau of  
Standards

ADDRESS: Washington, DC 20234

TITLE: A Procedure for Estimating Automobile Fuel  
Consumption on Congested Urban RoadsReport No. CO-75-10057, NBSIR 74-595, 20 p.  
1974, AugustSPONSOR: U.S. Dept. of Transportation, Urban Mass  
Transportation AdministrationKEYWORDS: AUTOMOBILES; FUEL CONSUMPTION; URBAN  
AREAS; HIGHWAYS; DRIVING CYCLE; VEHICLE MILES  
TRAVELED; TRAFFIC; FORECASTING;  
CLASSIFICATIONS; WEIGHT; SIZE; AIR  
CONDITIONING; TRAFFIC CONTROL; FUEL ECONOMY  
AVAILABILITY: NTIS

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Library of Congress, Congressional Research  
Service

ADDRESS: Washington, DC 20540

TITLE: National Energy Transportation. Volume  
III: Issues and ProblemsCongressional Committee Print, 95th Congress, 2nd  
Session, Publication No. 95-15, 560 p.

1978, March

SPONSOR: U.S. Senate, Committee on Energy and  
Natural Resources; U.S. Senate, Committee on  
Commerce, Science, and TransportationKEYWORDS: WEATHER; HAZARDS; LIQUEFIED NATURAL  
GAS; INTERNATIONAL RELATIONS; REGIONAL  
ANALYSIS; FUELS; RAIL TRANSPORTATION; ENERGY  
SUPPLIES; ENERGY RESOURCES; PIPELINE  
TRANSPORTATION; COAL; PETROLEUM; NATURAL GAS;  
TRUCKS; CARGO TRANSPORTATION; HIGHWAY  
TRANSPORTATION; NUCLEAR FUELS; WATER  
TRANSPORTATION; ALASKA; IMPORTS; TANKER  
SHIPS; SAFETY; TRANSPORTATION; FUEL  
EFFICIENCY; STANDARDS; RATES (COSTS);  
REGULATIONS

AVAILABILITY: GPO, Stock No. 052-070-04469-1

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Liff, S.D.

Voorhees (Alan H.) and Associates Inc.

ADDRESS: McLean, VA

TITLE: Travelers' Attitudes and Energy  
Conservation

20 p.

KEYWORDS: TRAVEL; ATTITUDES; ENERGY CONSERVATION;  
BEHAVIOR; PLANNING; FORECASTING; AUTOMOBILE  
DRIVERS; AUTOMOTIVE FUELS; PRICES;  
AVAILABILITY; SOCIO-ECONOMIC FACTORS; FUEL  
ECONOMY; VEHICLE TRIPS; ENERGY SHORTAGES;  
GASOLINE; URBAN TRANSPORTATION; SURVEYS;  
PUBLIC OPINION; AUTOMOBILES; OWNERSHIP;  
COMMUTING

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Lindgren, L.; Fitzgibbons, R.G.

Rath &amp; Strong Inc.

ADDRESS: 21 Wrothen Road, Lexington, MA 02173

TITLE: Automotive Data Base for Manufacturing  
Assessment System

398 p.

1976, June 1

SPONSOR: U.S. Dept. of Transportation,  
Transportation Systems CenterKEYWORDS: AUTOMOTIVE INDUSTRY; TABLES (DATA);  
GRAPHS (CHARTS); DATA BASES; COSTS;  
DEVELOPMENT; MAINTENANCE; PRODUCTION;  
COMPARATIVE EVALUATIONS; MANUFACTURING;  
MANUFACTURERS; ENGINES; AUTOMOBILES;  
VEHICLES; FUEL ECONOMY; TRUCKS; EQUIPMENT

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Lindsey-Kaufman Co

ADDRESS: 53 Hamilton Place, Tenafly, NJ 07670

TITLE: Projection of Light Truck Population to  
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1978, October

SPONSOR: Oak Ridge National Laboratory, Energy  
Division, Regional and Urban Studies Section;  
U.S. Dept. of Energy, Division of  
Transportation Energy ConservationKEYWORDS: TRUCKS; INVENTORIES; FORECASTING;  
OWNERSHIP; GROWTH; HIGHWAY TRANSPORTATION;  
UTILIZATION; VEHICLE REGISTRATIONS;  
SOCIO-ECONOMIC FACTORS; VANS  
AVAILABILITY: NTIS

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Lippmann, S.A.; Oblizajek, K.L.; Wetters, J.J.

Uniroyal Tire Co.

TITLE: Sources of Rolling Resistance in Radial  
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Automotive Engineers' Congress and  
Exposition, Cobo Hall, Detroit, Michigan,  
February 27 - March 3, 1978, 16 p.

1978

KEYWORDS: TIRES; FRICTION; WEAR; TESTING; HEAT;  
GRAPHS (CHARTS); DESIGN  
AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096 \$2.50

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LHC Corp.

ADDRESS: 476 Dunn Circle, Sparks, NV 89431

TITLE: Evaluation of Selected Drive Components

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Final Report. Phase I

Report No. SAN/1164-1, LNC-770401-B, v.p.  
1977, June 30

SPONSOR: Energy Research and Development  
Administration, San Francisco Operations  
Office; U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: FLYWHEELS; ENERGY STORAGE; DIAGRAMS;  
GRAPHS (CHARTS); ELECTRIC VEHICLES; TESTING;  
MODELS; MOTORS; BEARINGS; SHAFTS; SEALS  
AVAILABILITY: NTIS

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Locatoff, V.V.  
Battelle Pacific Northwest Laboratories  
ADDRESS: Richland, WA 99352  
TITLE: Flywheel/Heat Engine Power for an  
Energy-Economic Personal Vehicle

Report No. BNWL-2006, 48 p.  
1976, March

SPONSOR: Energy Research and Development  
Administration  
KEYWORDS: FLYWHEELS; AUTOMOBILES; HEAT ENGINES;  
FUEL CONSUMPTION; TABLES (DATA); FUEL  
ECONOMY; DESIGN  
AVAILABILITY: NTIS

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Lutin, J.H.  
Princeton University, Dept. of Civil Engineering  
ADDRESS: Princeton, NJ  
TITLE: Energy Savings for Work Trips: Analysis  
of Alternative Commuting Patterns for New  
Jersey

Report presented at the 54th Annual Meeting of  
the Transportation Research Board, published  
in "Transportation Energy Conservation and  
Demand," Transportation Research Record 561,  
23-36

1976

KEYWORDS: ENERGY CONSERVATION; COMMUTING; NEW  
JERSEY; MAPS; COMPARATIVE EVALUATIONS; ENERGY  
CONSUMPTION; GOVERNMENT POLICIES;  
AUTOMOBILES; PUBLIC TRANSPORTATION; PLANNING;  
AUTOMOBILE OCCUPANCY; MODELS; CARPOOLING;  
EFFICIENCY  
AVAILABILITY: National Academy of Sciences,  
Transportation Research Board, 2101  
Constitution Ave. NW, Washington, DC 20418  
\$5.00 for Transportation Research Record 561

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Rao, D.J.; Wang, G.H.; Meltzer, N.  
U.S. Dept. of Transportation, Transportation  
Systems Center  
ADDRESS: Kendall Square, Cambridge, MA 02142  
TITLE: Forecasting Models for Air Freight Demand  
and Projection of Cargo Activity at U.S. Air  
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Report No. FAA-AVP-77-2, 175 p.  
1977, January

SPONSOR: U.S. Dept. of Transportation, Federal  
Aviation Administration, Office of Aviation  
Policy  
KEYWORDS: FORECASTING; MODELS; CARGO  
TRANSPORTATION; AVIATION; AIRPORTS;  
ECONOMETRIC MODELS; PASSENGER EMPLACEMENTS;  
TABLES (DATA); PASSENGER TRANSPORTATION;  
GRAPHS (CHARTS); INTERNATIONAL TRAVEL; DEMAND  
(ECONOMICS)  
AVAILABILITY: NTIS

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Nak, K.K.; Jones, P.S.  
Georgia Institute of Technology  
TITLE: Priority Analysis Procedure for Ranking  
Highway Improvement Projects

Report presented at the 54th Annual Meeting of  
the Transportation Research Board, published  
in Transportation Research Record 585, 35-48  
1976

KEYWORDS: HIGHWAYS; CONSTRUCTION; PLANNING; STATE  
GOVERNMENT; QUESTIONNAIRES  
AVAILABILITY: National Academy of Sciences,  
Transportation Research Board, 2101  
Constitution Ave. NW, Washington, DC 20418  
\$3.60 for Transportation Research Record 585

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Nalliaris, A.C.; Hsia, R.; Gould, H.H.  
U.S. Dept. of Transportation  
ADDRESS: Washington, DC  
TITLE: Concise Description of Auto Fuel Economy  
and Performance in Recent Model Years

Paper No. 760045 presented at the Automotive  
Engineering Congress and Exposition, Detroit,  
Michigan, February 23-27, 1976, 13 p.

1976

SPONSOR: Society of Automotive Engineers  
KEYWORDS: ALGORITHMS; FUEL ECONOMY; VEHICLES;  
TABLES (DATA); GRAPHS (CHARTS); AUTOMOBILES;  
TRUCKS; PERFORMANCE; ACCELERATION  
AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096 \$2.75

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Handelker, D.W.; Stamper, R.A.  
Washington, University of, School of Law  
ADDRESS: Seattle, WA 98105  
TITLE: New Frontiers for Land Development Controls

Paper presented at the 54th 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 20418  
\$6.00 for Transportation Research Record No.  
565

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Narcus, A.  
Mechanical Technology Inc.  
ADDRESS: 968 Albany-Shaker Road, Latham, NY  
TITLE: An Advanced Electric Motor Transmission  
for Electric Vehicles: Development Plan.  
Technical Report

Report No. COO/2835-3, v.p.  
1977, November

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: TECHNOLOGY ASSESSMENT; EFFICIENCY;  
DESIGN; FABRICATION; ELECTRIC VEHICLES;  
MODELS; TABLES (DATA); TRANSPORTATION; GRAPHS  
(CHARTS); TESTING  
AVAILABILITY: NTIS



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Marcus, A.; Pinkus, O.  
Mechanical Technology Inc.  
ADDRESS: Latham, NY  
TITLE: Characterization Stud. of an Electric  
Motor-Transmission System for Electric  
Vehicles: Technical Report

Report No. COO/2835-2, v.p.

1977, September

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

Transportation Energy Conservation

KEYWORDS: ELECTRIC VEHICLES; PERFORMANCE; DESIGN;

BATTERIES; TECHNOLOGY; TESTING;

SPECIFICATIONS; ELECTRIC MOTORS; EFFICIENCY;

AUTOMOTIVE ENGINEERING; COST ESTIMATES;

GRAPHS (CHARTS); TABLES (DATA)

AVAILABILITY: NTIS

Characteristics of the 1975 Ford 140-CID  
Automotive Engine--Experimental Data

Report No. PB-261771, DOT-TSC-OST-76-43, 40 p.  
1976, November

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, Power and Propulsion Branch  
KEYWORDS: FUEL CONSUMPTION; AUTOMOTIVE EMISSIONS;  
INTERNAL COMBUSTION ENGINES; PERFORMANCE;  
HYDROCARBONS; CARBON MONOXIDE; NITROGEN  
OXIDES; TESTING; GRAPHS (CHARTS); TABLES  
(DATA)

AVAILABILITY: NTIS

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Harek, C.; Jones, T.R.  
Vulcan Materials Co.  
TITLE: Will There Be a Materials Crisis?

Paper published in Transportation Research Board  
Special Report 166, 18-28

1976

KEYWORDS: CONSTRUCTION; MATERIALS;

TRANSPORTATION; MINERALS; RESERVES;

PRODUCTION; TABLES (DATA); 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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Harek, Marketing Committee  
ADDRESS: 401 W. Michigan Ave., Chicago, IL 60611  
TITLE: State Boat Registration 1967 - 1975

25 p.

KEYWORDS: BOATS; VEHICLE REGISTRATIONS;  
MATERIALS; TABLES (DATA); SIZE

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Marshall, W.F.; Stamper, K.R.  
Energy Research and Development Administration,  
Bartlesville Energy Research Center  
ADDRESS: P.O. Box 1398, Bartlesville, OK 74003  
TITLE: Fuel Consumption, Emissions, and Power  
Characteristics of the 1975 Datsun 119-CID  
Automotive Engine--Experimental Data

Report No. PB-261308, DOT-TSC-OST-76-42, 40 p.  
1976, November

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, Power and Propulsion Branch

KEYWORDS: FUEL CONSUMPTION; AUTOMOTIVE EMISSIONS;  
INTERNAL COMBUSTION ENGINES; PERFORMANCE;  
TESTING; CARBON MONOXIDE; NITROGEN OXIDES;  
HYDROCARBONS; GRAPHS (CHARTS); TABLES (DATA)

AVAILABILITY: NTIS

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Marshall, W.F.; Stamper, K.R.  
Energy Research and Development Administration,  
Bartlesville Energy Research Center  
ADDRESS: P.O. Box 1398, Bartlesville, OK 74003  
TITLE: Fuel Consumption, Emissions, and Power

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Martin, W.F. (ed.)  
Massachusetts Institute of Technology, Workshop  
on Alternative Energy Strategies (WAES)  
ADDRESS: Cambridge, MA 02139  
TITLE: Energy Supply to the Year 2000: Global  
and National Studies

Second Technical Report of the Workshop on  
Alternative Energy Strategies (WAES), 422 p.  
1977

SPONSOR: National Science Foundation

KEYWORDS: ENERGY SUPPLIES; FORECASTING;

INTERNATIONAL ANALYSIS; COAL; RESERVES;

ENERGY DEMAND; NATURAL GAS; PRODUCTION;

ENERGY CONSUMPTION; NUCLEAR ENERGY; FUELS;

FOSSIL FUELS; UNCONVENTIONAL ENERGY SOURCES;

PETROLEUM; INTERNATIONAL TRADE; GROWTH;

CANADA; DENMARK; FINLAND; FRANCE; GERMANY

FEDERAL REPUBLIC; ITALY; JAPAN; MEXICO;

NETHERLANDS; NORWAY; SWEDEN; UNITED KINGDOM;

UNITED STATES; OPEC; COSTS; TABLES (DATA);

EUROPE; GOVERNMENT POLICIES; PRICES

AVAILABILITY: MIT Press, Cambridge, MA 02139  
\$30.00

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Martini, W.R.  
Washington, University of, Joint Center for  
Graduate Study  
ADDRESS: 100 Sprout Rd., Richland, WA 99352  
TITLE: Stirling Engine Design Manual

Final Report, Report No. DOE/NAEA/3152-78/1, NAEA  
CR-135382, 370 p.

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

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Mason, W.T., Jr.; Bobbe, P.S.  
General Motors Corp., Research Laboratories,  
Fluid Dynamics Research Dept.  
ADDRESS: Warren, MI 48090  
TITLE: The Drag Related Flow Field  
Characteristics of Trucks and Buses

Research Publication GMR-2257, presented at 1976  
GMR Symposium on Aerodynamic Drag Mechanisms  
of Bluff Bodies and Road Vehicles, September  
27, 1976, 64 p.

1977, August

KEYWORDS: TRUCKS; BUSES (VEHICLES); AERODYNAMICS;  
DESIGN; SIZE; DRAG; TRAILERS; DIAGRAMS;

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 PHOTOGRAPHS

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 Maximina, D.E. (compiler); Mobley, E.R. (ed.)  
 General Motors Corp., Research Laboratories,  
 Library, System on Automotive Safety  
 Information  
 ADDRESS: Warren, MI 48090  
 TITLE: Electric Vehicles, 1890-1966: A  
 Bibliography

Report No. GMR-2425, SASI 77-521, v.p.  
 1977, May 13  
 KEYWORDS: ELECTRIC VEHICLES; BIBLIOGRAPHIES;  
 HISTORY; AUTOMOBILES; BUSES (VEHICLES);  
 TAXICABS; TRUCKS; EQUIPMENT; BATTERIES

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 McCarthy, R.P.; Morrison, P.A.  
 Rand Corp.  
 ADDRESS: 1700 Main Street, Santa Monica, CA 90406  
 TITLE: The Changing Demographic and Economic  
 Structure of Nonmetropolitan Areas in the  
 1970's

Report No. P-6062, earlier version given at  
 Annual Meeting of Population Association of  
 America, April, 1977, St. Louis, Missouri, 51  
 p.  
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 KEYWORDS: POPULATION GROWTH; DEMOGRAPHY; URBAN  
 DEVELOPMENT; RURAL AREAS; RECREATION; FAMILY  
 LIFE; MANUFACTURING; EMPLOYMENT; REGIONAL  
 ANALYSIS; POPULATION MIGRATION; STATE  
 GOVERNMENT; TABLES (DATA); ECONOMIC  
 CONDITIONS; INCOME; MAPS; TRANSPORTATION;  
 COMMUTING; GRAPHS (CHARTS); LIFE STYLE;  
 SOCIO-ECONOMIC FACTORS

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 McGillivray, R.G.  
 Urban Institute  
 ADDRESS: 2100 M Street NW, Washington, DC 20037  
 TITLE: Gasoline Use by Automobiles

Paper presented at the 54th Annual Meeting of the  
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 "Transportation Energy Conservation and  
 Demand," 45-56

1976  
 SPONSOR: National Academy of Sciences,  
 Transportation Research Board  
 KEYWORDS: GASOLINE; CONSUMPTION; AUTOMOBILES;  
 TRANSPORTATION; FUEL CONSUMPTION; COSTS;  
 TABLES (DATA); FORECASTING; DEMAND  
 (ECONOMICS); MATHEMATICAL MODELS; PASSENGER  
 TRANSPORTATION; OWNERS; MARKET; PRICES;  
 ELASTICITY (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  
 SPONSOR: McGraw-Hill Publications, Fleet Owner  
 KEYWORDS: SURVEYS; MOTOR VEHICLES; LUBRICANTS;  
 DIESEL FUELS; PURCHASES; QUESTIONNAIRES;  
 MAINTENANCE; FUEL CONSUMPTION; TRUCKS; TABLES  
 (DATA); GASOLINE; FUEL STORAGE  
 AVAILABILITY: \$25.00

<401>  
 McKetta, 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  
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 McLean, A.F.; Baker, R.R.  
 Ford Motor Co.  
 ADDRESS: Dearborn, MI 48121  
 TITLE: Brittle Materials Design, High Temperature  
 Gas Turbine. Volume 2: Ceramic Turbine  
 Rotar Technology

Report No. AMRC TR 78-14, DA-OD 4733, 12th  
 Interim Report for the Period January -  
 September 1977, 93 p.  
 1978, March

SPONSOR: U.S. Dept. of Defense, Army Materials  
 and Mechanics Research Center; U.S. Dept. of  
 Energy, Division of Transportation Energy  
 Conservation  
 KEYWORDS: MATERIALS; DESIGN; GAS TURBINES;  
 CERAMICS; ROTORS; TECHNOLOGY; HIGH  
 TEMPERATURE; BRITTLNESS; FABRICATION;  
 SILICON NITRIDES; TESTING; COMPUTER PROGRAMS;  
 TABLES (DATA); GAS TURBINE ENGINES; SILICON  
 CARBIDES; MECHANICAL PROPERTIES; PHOTOGRAPHS;  
 DIAGRAMS  
 AVAILABILITY: NTIS

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 McNutt, R.; Pirkey, D.; Dulla, R.  
 U.S. Dept. of Energy; Energy and Environmental  
 Analysis Inc.  
 TITLE: Passenger Car Classification Using  
 Interior Volume: A 1978 Up-Date

Paper No. 780133, presented at the Society of  
 Automotive Engineers' Congress and  
 Exposition, Cobo Hall, Detroit, Michigan,  
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1978  
 KEYWORDS: AUTOMOBILES; CLASSIFICATIONS; VOLUME;  
 SIZE; WEIGHT; FUEL ECONOMY; DESIGN; PASSENGER  
 TRANSPORTATION; TABLES (DATA)  
 AVAILABILITY: Society of Automotive Engineers  
 Inc, 400 Commonwealth Drive, Warrendale, PA  
 15096 \$2.50

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 McNutt, R.; Pirkey, 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  
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Exposition, Cobo Hall, Detroit, Michigan,  
February 27 - March 3, 1978, 44 p.

1978

KEYWORDS: FUEL ECONOMY; AUTOMOBILES; TESTING;  
COMPARATIVE EVALUATIONS; ENVIRONMENTAL  
PROTECTION AGENCY; US DOE; HILHAGE;  
OPERATION; DRIVING CYCLE; DATA ACQUISITION;  
MANUFACTURERS; CLASSIFICATIONS; GRAPHS  
(CHARTS)

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

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McNutt, N.D.; Pirkey, D.; Dulla, R.  
Federal Energy Administration  
ADDRESS: Washington, DC

TITLE: Development of a System of Comparable Car  
Classes for Fuel Economy Labeling

Paper No. 760794, paper presented at the Society  
of Automotive Engineers Automobile  
Engineering Meeting, Dearborn, Michigan,  
October 18-22, 1976, 38 p.

1976

SPONSOR: Society of Automotive Engineers  
KEYWORDS: AUTOMOBILES; FUEL ECONOMY; COMPARATIVE  
EVALUATIONS; CLASSIFICATIONS; TABLES (DATA);  
PUBLIC OPINION; CONSUMERS; PRICES;  
PERFORMANCE; GRAPHS (CHARTS); ENVIRONMENTAL  
PROTECTION AGENCY; SIZE

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

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Head, W.J.; Rogers, G.W.; Smith, R.Z.  
California, University of; Alaska, University of,  
Institute of Social, Economic and  
Governmental Research; U.S. Dept. of State  
ADDRESS: CU, Santa Barbara, CA 93109; AU,  
College, AK 99701; USDS, Washington, DC  
20520

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; PRUDHOE BAY  
(ALASKA); ENVIRONMENTAL IMPACT; TABLES  
(DATA); MAPS; ECONOMIC ANALYSIS;  
TRANSPORTATION; GOVERNMENT POLICIES;  
REGULATIONS; COSTS; CANADA; ALASKA;  
TRANSPORTATION SYSTEMS

AVAILABILITY: American Enterprise Institute for  
Public Policy Research, 1150 Seventeenth St.  
NW, Washington, DC 20036 \$3.25

## &lt;407&gt;

Mechanical Technology Inc., R&D Division  
TITLE: Characterization Study of an Electric  
Motor-Transmission System for Electric  
Vehicles

Report No. MCP/R2835-01, v.p.

1978, March

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; PERFORMANCE; DESIGN;  
AUTOMOBILE TRANSMISSIONS; TABLES (DATA);  
GRAPHS (CHARTS)

AVAILABILITY: NTIS

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Hellman, R.S.  
U.S. Dept. of Transportation, Transportation  
Systems Center  
ADDRESS: Kendall Square, Cambridge, MA 02142  
TITLE: Aggregate Auto Travel Forecasting: State  
of the Art and Suggestions for Future Research

Report No. PB-263351, DOT-TSC-OST-76-51, 46 p.

1976, December

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: NTIS

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Mencik, Z.; Blusberg, P.W.  
Ford Motor Co., Engineering and Research Staff  
ADDRESS: Dearborn, MI  
TITLE: Representation of Engine Data by  
Multi-Variate Least-Squares Regression

Paper No. 780288, presented at the Society of  
Automotive Engineers' Congress and  
Exposition, Cobo Hall, Detroit, Michigan,  
February 27 - March 3, 1978, 16 p.

1978

KEYWORDS: AUTOMOTIVE ENGINES; VELOCITY;  
PERFORMANCE; DESIGN; LOAD 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

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Mencik, Z.; Tobler, W.E.; Blusberg, P.W.  
Ford Motor Co., Engineering and Research Staff  
ADDRESS: Dearborn, MI  
TITLE: Simulation of Wide-Open Throttle Vehicle  
Performance

Paper No. 780289, presented at the Society of  
Automotive Engineers' Congress and  
Exposition, Cobo Hall, Detroit, Michigan,  
February 27 - March 3, 1978, 16 p.

1978

KEYWORDS: MODELS; COMPUTERIZED SIMULATION;  
AUTOMOBILES; VELOCITY; MECHANICAL  
TRANSMISSIONS; TIRES; FRICTION; AUTOMOTIVE  
ENGINES; PERFORMANCE; GRAPHS (CHARTS)

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

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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 ANALYSIS; CANADA; MAPS;  
AUTOMOBILES; GAS STATIONS; SALES

&lt;412&gt;

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Hightoll, P.; Hahn, W.F.  
Booz, Allen & Hamilton Inc., Design and  
Development Division  
ADDRESS: Cleveland, OH 44131  
TITLE: Preliminary Power Train Design for a  
State-of-the-Art Electric Vehicle

Report No. DOE/NASA/0595-78/1, NASA CR-13541, 140  
p.

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: POWER TRAIN SYSTEMS; ELECTRIC VEHICLES;  
TECHNOLOGY ASSESSMENT; MOTORS; AUTOMOBILE  
TRANSMISSIONS; MODELS; DESIGN; COMPUTERIZED  
SIMULATION; DIAGRAMS; TABLES (DATA)  
AVAILABILITY: NTIS

&lt;413&gt;

Hiles, D.L.; Wiepelt, G.W.  
General Motors Corp., Engineering Staff  
ADDRESS: Detroit, MI  
TITLE: Optimizing Engine and Car Design for Fuel  
Economy and Emissions

Paper No. 760855, published in SAE SP-411, 23-32  
1978, August

SPONSOR: Society of Automotive Engineers,  
Milwaukee Section

KEYWORDS: FUEL ECONOMY; AUTOMOTIVE ENGINEERING;  
AUTOMOBILES; DESIGN; WEIGHT; AUTOMOBILE  
EMISSION CONTROL; FUEL CONSUMPTION; GRAPHS  
(CHARTS); PERFORMANCE

AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096 for SAE SP-411

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Maline, J.A.; Cantwell, C.; Sissler, K.  
Chilton Co.  
ADDRESS: Radnor, PA 19089  
TITLE: Automobile Characteristics Historical Data  
Base

Report No. DOT-TSC-OST-77-12, 76 p.

1977, August

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 Systems Center

KEYWORDS: DATA BASES; HISTORY; AUTOMOBILES;  
CHARACTERISTICS; FUEL ECONOMY; PRODUCTION;  
TABLES (DATA); AUTOMOBILE EMISSIONS;  
MANUFACTURERS; COMPARATIVE EVALUATIONS;  
PERFORMANCE; OPERATION; WEIGHT

AVAILABILITY: NTIS

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Minor, D.K.  
Copper Development Association Inc.  
ADDRESS: Birmingham, MI  
TITLE: Comparison of an Electric Versus a  
Gasoline Powered Utility Truck in Two Years  
of a Service Test Program

Paper presented at the Fourth International  
Electric Vehicle Symposium (sponsored by the  
Electric Vehicle Council and the  
International Union of Producers and  
Distributors of Electrical Energy), held in  
Dusseldorf, Germany, August 31 - September 2,  
1976, 25 p.  
1976, September

KEYWORDS: COMPARATIVE EVALUATIONS; ELECTRIC  
VEHICLES; TESTING; OPERATING COSTS;  
MAINTENANCE; VANS; PERFORMANCE; FUEL  
CONSUMPTION  
AVAILABILITY: Electric Vehicle Council, 90 Park  
Ave., New York, NY 10016 \$1.50

&lt;416&gt;

Nitric, S.  
Ohio State University, Dept. of Civil Engineering  
ADDRESS: Columbus, OH  
TITLE: Methodology of Comparing Modes in Urban  
Transport

Paper presented at the Fifty-Sixth Annual Meeting  
of the Transportation Research Board,  
Washington, DC, January 24-28, 1977, 34 p.

1977, January

SPONSOR: Ohio State University, Graduate School  
KEYWORDS: URBAN TRANSPORTATION; COMPARATIVE  
EVALUATIONS; TRANSPORTATION SYSTEMS; RAIL  
TRANSPORTATION; RAPID TRANSIT SYSTEMS; BUSES  
(VEHICLES); COSTS; BAY AREA RAPID TRANSIT  
SYSTEM

&lt;417&gt;

Nittal, R.K.  
Union College, Mechanical Engineering Dept.  
ADDRESS: Schenectady, NY 12308  
TITLE: Energy Intensity of Intercity Passenger  
Rail

Report No. DOT/RSRD/DPS/50-78/7, 296 p.

1977, December

SPONSOR: 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

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Nittal, R.K. (ed.)  
Union College  
ADDRESS: Schenectady, NY 12308  
TITLE: Third National Conference on the Effects  
of Energy Constraints on Transportation  
Systems

Proceedings of a conference held at Union  
College, Schenectady, New York, August 2-6,  
1976, 408 p.

1977, May

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

KEYWORDS: TRANSPORTATION SYSTEMS; ENERGY  
CONSUMPTION; ENERGY CONSERVATION; URBAN  
TRANSPORTATION; BAY AREA RAPID TRANSIT  
SYSTEM; CARGO TRANSPORTATION; RAIL  
TRANSPORTATION; PASSENGER TRANSPORTATION;  
REGULATIONS; CARPOOLING; TRUCKS; FUEL  
ECONOMY; INTERCITY TRANSPORTATION; RAPID  
TRANSIT SYSTEMS; AIR TRANSPORTATION; TABLES  
(DATA); CONFERENCES; COMPUTERIZED SIMULATION  
AVAILABILITY: GPO, Stock No. 060-000-00073-5

&lt;419&gt;

Nittal, R.K.; Rose, A.  
Union College, Mechanical Engineering Dept.

<419> CONT.  
ADDRESS: Schenectady, NY 12308  
TITLE: Track Data Characteristics for New York  
City - Buffalo Corridor

Final Report, Report No. DOT/RSPD/DPB/50-77/09,  
89 p.  
1977, August  
SPONSOR: U.S. Dept. of Transportation, Office of  
University Research  
KEYWORDS: NEW YORK CITY; RAIL TRANSPORTATION;  
RAILROAD TRACKS; DISTANCE; BUFFALO (NEW  
YORK); TRAVEL TIME; ENERGY CONSUMPTION;  
EFFICIENCY; AUTOMOBILES; URBAN  
TRANSPORTATION; SPEED LIMITS;  
CHARACTERISTICS; TABLES (DATA); GRAPHS  
(CHARTS); COMPARATIVE EVALUATIONS

<420>  
Mittal, R.K.; Santamaria, J.  
Union College, Mechanical Engineering Dept.  
ADDRESS: Schenectady, NY 12308  
TITLE: State of the Art in Passenger Rail-Rolling  
Stock Equipment

Final Report, Report No. DOT/RSPD/DPB/50-77/10,  
v. p.  
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; AMTRAK  
AVAILABILITY: NTIS

<421>  
Moble, R.R. (compiler)  
General Motors Corp., Research Laboratories,  
Library, System on Automotive Safety  
Information  
ADDRESS: Warren, MI 48090  
TITLE: Bibliography on Electric Vehicles:  
1967-1976

Report No. SASI 77-401, v.p.  
1977, April 15  
KEYWORDS: ELECTRIC VEHICLES; BIBLIOGRAPHIES;  
HISTORY; CONFERENCES; ENVIRONMENTAL IMPACT;  
GOVERNMENT POLICIES; AUTOMOBILES; BUSES  
(VEHICLES); HYBRID ELECTRIC-POWERED VEHICLES;  
TRUCKS; VANS; BATTERIES

<422>  
Moncrief, L.W.; Houser, T.W.; Pitrak, P.  
Michigan State University, Dept. of Park and  
Recreation Resources  
ADDRESS: East Lansing, MI  
TITLE: The Influence of Gasoline Price and  
Availability Upon Recreation Travel Propensity

Communications, 3(5), 431-447  
1977  
SPONSOR: Upper Great Lakes Regional Commission  
KEYWORDS: GASOLINE; PRICES; RECREATIONAL TRAVEL;  
FUEL CONSUMPTION; TOURISM; GREAT LAKES;  
REGIONAL ANALYSIS; INCOME; AUTOMOBILES;  
ATTITUDES; PUBLIC OPINION

<423>  
Monford, L.G.  
National Aeronautics and Space Administration,

Lyndon B. Johnson Space Center  
ADDRESS: Houston, TX 77058  
TITLE: Performance Characteristics of a Diesel  
Engine Using Low- and Medium-Energy Gases as  
a Fuel Supplement (Fumigation)

Report No. N77-14955, NASA TM X-58188, 23 p.  
1976, October  
SPONSOR: National Aeronautics and Space  
Administration  
KEYWORDS: DIESEL ENGINES; SOLID WASTES; ALTERNATE  
FUELS; FUMIGATION; DIESEL FUELS; PERFORMANCE;  
SYNTHETIC FUELS  
AVAILABILITY: NTIS

<424>  
Moon, A.E.  
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 (CHARTS)

<425>  
Moon, A.E.  
Stanford Research Institute  
ADDRESS: Menlo Park, CA 94025  
TITLE: Energy Study of Railroad Freight  
Transportation. Volume 2: Industry  
Description

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; TRUCKS; REGULATIONS; TABLES  
(DATA); GRAPHS (CHARTS)

<426>  
Moon, A.E.; Proctor, H.S.  
Stanford Research Institute  
ADDRESS: Menlo Park, CA 94025  
TITLE: Energy Study of Railroad Freight  
Transportation. Volume 4: Efficiency  
Improvements and Industry Future

SRI Project TCU 5419, 155 p.  
1977, August  
SPONSOR: Energy Research and Development  
Administration  
KEYWORDS: RAIL TRANSPORTATION; CARGO  
TRANSPORTATION; EFFICIENCY; FORECASTING;  
TECHNOLOGY; ENERGY CONSERVATION; MARKET;  
RESEARCH; BIBLIOGRAPHIES; COSTS; EQUIPMENT

<427>  
Moore, M. (ed.)  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,

<427>  
 <427> CONT.  
 DC 20418  
 TITLE: Transportation Programming and Management  
 Transportation Research Record 585, 7 reports  
 prepared for the 54th Annual Meeting of the  
 Transportation Research Board, 78 p.  
 1976  
 KEYWORDS: TRANSPORTATION; MANAGEMENT; HIGHWAYS;  
 CONSTRUCTION; PLANNING; SAFETY; FLORIDA;  
 WASHINGTON; STATE GOVERNMENT; GOVERNMENT  
 POLICIES; TABLES (DATA)  
 AVAILABILITY: \$3.60

<428>  
 Morlok, E.K.  
 Pennsylvania, University of, Civil and Urban  
 Engineering Dept.  
 ADDRESS: Philadelphia, PA 19174  
 TITLE: An Engineering Analysis and Comparison of  
 Railroad and Truck Line-Haul Work (Energy)  
 Requirements

Paper presented in the proceedings of the Third  
 National Conference on the Effects of Energy  
 Constraints on Transportation Systems, R. K.  
 Mittal (ed.), pp. 81-107; a similar paper  
 entitled "A Comparison of Railroad and Truck  
 Line-Haul Work (Energy) Requirements Under  
 Various Shipment Weight, Speed, and  
 Topographic Conditions" was presented to the  
 Transportation Research Board, January 1976  
 1977, March  
 KEYWORDS: RAIL TRANSPORTATION; TRUCKS; ENERGY  
 CONSUMPTION; WEIGHT; VELOCITY; ENERGY DEMAND;  
 COMPARATIVE EVALUATIONS; CARGO  
 TRANSPORTATION; INTERCITY TRANSPORTATION;  
 FUEL CONSUMPTION; TABLES (DATA); GRAPHS  
 (CHARTS); ENGINEERING; MODELS; PROPULSION  
 AVAILABILITY: GPO, Stock No. 060-000-00073-5 for  
 entire proceedings

<429>  
 Morrison, P.A.  
 Rand Corp.  
 ADDRESS: 1700 Main Street, Santa Monica, CA 90406  
 TITLE: Current Demographic Change in Regions of  
 the United States

Report No. P-6000, presented at a conference on  
 "Alternatives to Confrontations: A National  
 Policy Toward Change", held at the University  
 of Texas, Austin, Texas, September 24-27,  
 1977, 37 p.  
 1977, November  
 SPONSOR: U.S. Dept. of Commerce  
 KEYWORDS: DEMOGRAPHY; ECONOMIC IMPACT; REGIONAL  
 ANALYSIS; POPULATION MIGRATION; EDUCATION;  
 SOCIAL PROBLEMS; URBAN AREAS; ENERGY  
 SHORTAGES; NORTHEASTERN STATES; IMPORTS;  
 GREAT LAKES; SOUTHERN STATES; WESTERN STATES;  
 POLITICAL OBJECTIVES; RURAL AREAS; PLANNING;  
 STABILITY; GROWTH; STATISTICS; GRAPHS  
 (CHARTS); TABLES (DATA); FAMILY LIFE; MAPS;  
 LABOR MIGRATION

<430>  
 Motor Vehicle Manufacturers Association of the  
 U.S. Inc.  
 ADDRESS: 300 New Center Building, Detroit, MI  
 48202  
 TITLE: Motor Vehicle Facts & Figures '78  
 Annual publication, 96 p.  
 1978  
 KEYWORDS: MOTOR TRANSPORTATION; STATISTICS; FUEL  
 ECONOMY; STANDARDS; TRUCKS; BUSES (VEHICLES);  
 PASSENGER TRANSPORTATION; ENERGY

CONSERVATION; ECONOMIC ANALYSIS;  
 MANUFACTURERS; GRAPHS (CHARTS); FUEL  
 CONSUMPTION; EMISSIONS; AIR TRANSPORTATION;  
 EXPORTS; WATER TRANSPORTATION; TAXES; RAIL  
 TRANSPORTATION; EMPLOYMENT; EARNINGS; ROADS;  
 ACCIDENTS; VEHICLE REGISTRATIONS; OWNERSHIP;  
 PRODUCTION; VEHICLE MILES TRAVELED

<431>  
 Motor Vehicle Manufacturers Association of the  
 U.S. Inc., Statistics Dept.  
 ADDRESS: 300 New Center Building, Detroit, MI  
 48202  
 TITLE: World Motor Vehicle Data: 1977 Edition

Annual publication, 206 p.  
 1977  
 KEYWORDS: STATISTICS; VEHICLES; TABLES (DATA);  
 INTERNATIONAL TRADE; PRODUCTION; EXPORTS;  
 VEHICLE REGISTRATIONS; AFRICA; ASIA; EUROPE;  
 IMPORTS; AUSTRALIA; NEW ZEALAND; REGIONAL  
 ANALYSIS; NORTH AMERICA; SOUTH AMERICA  
 AVAILABILITY: \$20.00

<432>  
 Motor Vehicle Manufacturers Association of the  
 U.S. Inc., Statistics Dept.  
 ADDRESS: Detroit, MI 48202  
 TITLE: Motor Vehicle Factory Sales from Plants in  
 U.S. & Canada

Weekly publication, Series No. FS-4, v.p.  
 Weekly  
 KEYWORDS: MOTOR VEHICLES; AUTOMOBILES; TRUCKS;  
 BUSES (VEHICLES); STATISTICS; EXPORTS;  
 IMPORTS; COSTS; PRODUCTION; SALES

<433>  
 Motorcycle Industry Council Inc., Research and  
 Statistics Dept.  
 ADDRESS: 4100 Buck Street, Suite 101, Newport  
 Beach, CA 92660  
 TITLE: 1978 Motorcycle Statistical Annual

Annual report, 46 p.  
 1978  
 KEYWORDS: MOTORCYCLES; STATISTICS; MARKET;  
 VEHICLE REGISTRATIONS; MANUFACTURERS;  
 UTILIZATION; VEHICLE MILES TRAVELED;  
 FINANCIAL DATA; SALES; IMPORTS; OPERATING  
 COSTS; ACCIDENTS; OWNERS; COSTS  
 AVAILABILITY: \$5.00

<434>  
 Hudge, R.R.; Wheeler, P.K.  
 U.S. Congress, Congressional Budget Office,  
 Natural Resources and Commerce Division  
 ADDRESS: Washington, DC  
 TITLE: Urban Mass Transportation: Options for  
 Federal Assistance

Budget Issue Paper, 73 p.  
 1977, February  
 KEYWORDS: URBAN TRANSPORTATION; MASS  
 TRANSPORTATION; GOVERNMENT POLICIES; BUDGETS;  
 CAPITAL; INVESTMENTS  
 AVAILABILITY: GPO \$1.65

<435>  
 Mueller Associates Inc.



<435> CONT.  
 ADDRESS: Baltimore, MD  
 TITLE: Status of Alcohol Fuels Utilization  
 Technology for Highway Transportation  
 Report No. HCP/H2923-01, 132 p.  
 1978, June  
 SPONSOR: U.S. Dept. of Energy, Division of  
 Transportation Energy Conservation  
 KEYWORDS: ALTERNATE FUELS; UTILIZATION; ALCOHOL  
 FUELS; HIGHWAY TRANSPORTATION; METHANOL;  
 ETHANOL; TESTING; ENGINES; EMISSIONS;  
 PERFORMANCE; FUEL ECONOMY; FUEL CONSUMPTION;  
 COMPARATIVE EVALUATIONS; PROPERTIES; COSTS;  
 GRAPHS (CHARTS); WATER  
 AVAILABILITY: NTIS

<436>  
 Mueller Associates Inc.  
 ADDRESS: Baltimore, MD  
 TITLE: Denaturants for Ethanol/Gasoline Blends  
 Report No. HCP/H2098-01, 16 p.  
 SPONSOR: U.S. Dept. of Energy, Division of  
 Transportation Energy Conservation  
 KEYWORDS: ETHANOL; GASOLINE; ALTERNATE FUELS;  
 DENATURANTS

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 Muftic, P.K.; Goffin, L.S.; Dougherty, C.D.  
 Delaware Valley Regional Planning Commission  
 ADDRESS: Philadelphia, PA  
 TITLE: Modal-Choice Analysis of an Exclusive Bus  
 and Car-Pool Lane (abridgment)

Paper published in Transportation Research Record  
 626, 27-29

1977  
 SPONSOR: U.S. Dept. of Transportation, Federal  
 Highway Administration; U.S. Dept. of  
 Transportation, Urban Mass Transportation  
 Administration; New Jersey Dept. of  
 Transportation  
 KEYWORDS: TRAFFIC CONTROL; HIGHWAY  
 TRANSPORTATION; BUSES (VEHICLES); CARPOOLING;  
 MODELS; COMPARATIVE EVALUATIONS  
 AVAILABILITY: National Academy of Sciences,  
 Transportation Research Board, 2101  
 Constitution Ave. NW, Washington, DC 20418  
 \$2.20 for Transportation Research Record 626

<438>  
 Mundt, P.M.  
 Peat, Marwick, Mitchell and Co.  
 TITLE: Multiproject Scheduling for Transportation  
 Construction Programs

Report presented at the 54th Annual Meeting of  
 the Transportation Research Board, published  
 in Transportation Research Record 585, 17-24

1976  
 KEYWORDS: TRANSPORTATION; CONSTRUCTION;  
 SCHEDULING; STATE GOVERNMENT; MANAGEMENT;  
 FUNDING; FLORIDA; PLANNING  
 AVAILABILITY: National Academy of Sciences,  
 Transportation Research Board, 2101  
 Constitution Ave. NW, Washington, DC 20418  
 \$3.60 for Transportation Research Record 585

<439>  
 Ruddy, R.A.  
 Tennessee, University of, Transportation Center  
 ADDRESS: Knoxville, TN  
 TITLE: Mass Transit Guidelines Versus a Consumer

<435>  
 Orientation in Public Transportation Systems

Paper published in Transportation Research Record  
 625, 33-37

1977  
 SPONSOR: National Cooperative Highway Research  
 Program  
 KEYWORDS: MASS TRANSPORTATION; PUBLIC  
 TRANSPORTATION; CONSUMERS; ATTITUDES; SERVICES  
 AVAILABILITY: National Academy of Sciences,  
 Transportation Research Board, 2101  
 Constitution Ave. NW, Washington, DC 20418  
 \$3.20 for Transportation Research Record 625

<440>  
 Munson, J.S.; Brainard, J.P.  
 Brookhaven National Laboratory, National Center  
 for Analysis of Energy Systems, Policy  
 Analysis Division  
 ADDRESS: Upton, NY 11973  
 TITLE: The Energy Situation in the Mid-Atlantic  
 Region

Report No. BNL 50703, 253 p.  
 1977, August  
 SPONSOR: U.S. Dept. of Energy  
 KEYWORDS: MIDDLE ATLANTIC STATES; ENERGY  
 SUPPLIES; ENERGY DEMAND; DISTRICT OF  
 COLUMBIA; DELAWARE; MARYLAND; NEW JERSEY; NEW  
 YORK; OHIO; PENNSYLVANIA; PUERTO RICO;  
 VIRGINIA; VIRGIN ISLANDS; ENERGY CONSUMPTION;  
 PETROLEUM; NATURAL GAS; COAL; NUCLEAR ENERGY;  
 HYDROELECTRIC POWER; TABLES (DATA); REGIONAL  
 ANALYSIS; STATE ANALYSIS; ELECTRIC UTILITIES;  
 PRODUCTION; EMPLOYMENT; GRAPHS (CHARTS);  
 PRICES; ENVIRONMENTAL IMPACT; AIR QUALITY;  
 WATER QUALITY; ENERGY CONSERVATION;  
 GOVERNMENT POLICIES; LEGISLATION  
 AVAILABILITY: NTIS

<441>  
 Murrell, J.D.  
 U.S. Environmental Protection Agency  
 TITLE: Light Duty Automotive Fuel Economy ...  
 Trends Through 1978

Paper 780036, presented at the Society of  
 Automotive Engineers' Congress and  
 Exposition, Cobo Hall, Detroit, Michigan,  
 February 27 - March 3, 1978, 36 p.

1978  
 SPONSOR: Society of Automotive Engineers  
 KEYWORDS: FUEL ECONOMY; AUTOMOBILES; TRUCKS;  
 STANDARDS; WEIGHT; GRAPHS (CHARTS); HISTORY;  
 MANUFACTURERS; TABLES (DATA); SALES  
 AVAILABILITY: Society of Automotive Engineers  
 Inc., 400 Commonwealth Drive, Warrendale, PA  
 15096 \$2.50

<442>  
 Nail, R.F.; Backus, G.A.  
 Dartmouth College, Thayer School of Engineering  
 ADDRESS: Hanover, NH 03755  
 TITLE: Evaluating the National Energy Plan

Technology Review, 79(8), 51-56  
 1977, July/August  
 KEYWORDS: NATIONAL ENERGY PLAN; ENERGY POLICY;  
 ENERGY MODELS; ENERGY CONSERVATION;  
 PETROLEUM; NATURAL GAS; COAL; PRICES;  
 FORECASTING; ENERGY DEMAND; IMPORTS;  
 PRODUCTION; COMPARATIVE EVALUATIONS;  
 GOVERNMENT POLICIES; OPEC; ENERGY CONSUMPTION

&lt;443&gt;

&lt;443&gt;

National Academy of Sciences, National Research Council, Assembly of Engineering, Energy Engineering Board, Committee on Advanced Energy Storage Systems  
 ADDRESS: 2101 Constitution Ave. NW, Washington, DC 20418  
 TITLE: Development Schedules for Vehicle Energy Storage Systems

19 p.

1977

SPONSOR: Energy Research and Development Administration

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

&lt;444&gt;

National Academy of Sciences, National Research Council, Assembly of Life Sciences, Committee on Toxicology  
 ADDRESS: Washington, DC  
 TITLE: Fuels and Fuel Additives for Highway Vehicles and Their Combustion Products: A Guide to Evaluation of Their Potential Effects on Health

49 p.

1976

SPONSOR: U.S. Environmental Protection Agency

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

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

&lt;445&gt;

National Academy of Sciences, National Research Council, Highway Research Board  
 ADDRESS: 2101 Constitution Ave. NW, Washington, DC 20418  
 TITLE: Travel Behavior

Highway Research Record No. 446, papers presented at the Fifty-Second Annual Meeting of the Highway Research Board, 66 p.

1973

KEYWORDS: TRAVEL; BEHAVIOR; URBAN TRANSPORTATION; DEMAND (ECONOMICS); INTERCITY TRANSPORTATION; MODELS; CHICAGO

AVAILABILITY: \$2.20

&lt;446&gt;

National Academy of Sciences, National Research Council, Highway Research Board  
 ADDRESS: 2101 Constitution Ave. NW, Washington, DC 20418

TITLE: Transportation Forecasting

Highway Research Record No. 472, papers presented at the Fifty-Second Annual Meeting of the Highway Research Board, 120 p.

1973

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

AVAILABILITY: \$3.60

&lt;447&gt;

National Academy of Sciences, National Research Council, Highway Research Board  
 ADDRESS: 2101 Constitution Avenue NW, Washington, DC 20418  
 TITLE: Highway and Urban Transportation in the 1970's and 1980's

Special Report 122, a panel discussion at the plenary session of the 50th Annual Meeting of the Highway Research Board, January 19, 1971, 23 p.

1971

KEYWORDS: HIGHWAY TRANSPORTATION; URBAN TRANSPORTATION; FORECASTING; SOCIO-ECONOMIC FACTORS; FUNDING; TECHNOLOGY; HOUSING

&lt;448&gt;

National Academy of Sciences, National Research Council, Highway Research Board  
 ADDRESS: 2101 Constitution Ave., NW, Washington, DC 20418  
 TITLE: Highway Capacity Manual: 1965

HRB Special Report 87, 411 p.

1976, September

KEYWORDS: HIGHWAYS; DESIGN; TRAFFIC CONTROL; TRAFFIC; VELOCITY; CAPACITY; PEAK-HOUR DEMAND; HIGHWAY TRANSPORTATION; RURAL AREAS; URBAN AREAS; BUSES (VEHICLES); DELAYS; DAILY VARIATIONS; TABLES (DATA); PHOTOGRAPHS; OPTIMIZATION; GRAPHS (CHARTS); CONSTRUCTION  
 AVAILABILITY: National Academy of Sciences, Transportation Research Board, 2101 Constitution Ave. NW, Washington, DC 20418 \$8.00

&lt;449&gt;

National Academy of Sciences, National Research Council, Highway Research Board, Advisory Committee on Movement of Goods in Urban Areas  
 ADDRESS: 2101 Constitution Ave. NW, Washington, DC 20418  
 TITLE: Urban Commodity Flow

Highway Research Board Special Report No. 120, report of a conference held December 6-9, 1970, 207 p.

1971

SPONSOR: U.S. Dept. of Transportation, Office of the Secretary; Canadian Ministry of Transport

KEYWORDS: URBAN TRANSPORTATION; PLANNING; CARGO TRANSPORTATION; TRUCKS; INTERCITY TRANSPORTATION; INTRACITY TRANSPORTATION; COSTS; GOVERNMENT POLICIES; FORECASTING; TRAFFIC; LABOR RELATIONS; TONNAGE; TABLES (DATA)

AVAILABILITY: \$6.00

&lt;450&gt;

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 54th Annual Meeting of the Transportation Research Board, 157 p.

1976

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

AVAILABILITY: \$6.00



<451>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Freight Transportation Characteristics  
Transportation Research Record 591, 53 p.  
1976  
KEYWORDS: CARGO TRANSPORTATION; PLANNING; DEMAND  
(ECONOMICS); URBAN TRANSPORTATION; RAIL  
TRANSPORTATION; INTERNATIONAL TRADE; TRUCKS  
AVAILABILITY: \$2.60

<452>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Air Travel and Aviation Facilities Planning  
Transportation Research Record 529, papers  
presented at the 54th Annual Meeting of the  
Transportation Research Board, 43 p.  
1975  
KEYWORDS: AIR TRANSPORTATION; AIRPORTS;  
ENVIRONMENTAL IMPACT; LAND USE; NOISE  
POLLUTION; WATER POLLUTION; AIR POLLUTION;  
SOLID WASTES; ECONOMICS; NEW YORK CITY;  
SOCIAL IMPACT ASSESSMENT; DEMAND (ECONOMICS);  
COSTS; GRAPHS (CHARTS); PLANNING; MODELS  
AVAILABILITY: \$2.00

<453>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Travel Behavior and Values  
Transportation Research Record 534, papers  
presented at the 54th Annual Meeting of the  
Transportation Research Board, 75 p.  
1975  
KEYWORDS: TRAVEL; BEHAVIOR; FORECASTING; URBAN  
TRANSPORTATION; SOCIO-ECONOMIC FACTORS;  
MATHEMATICAL MODELS; TABLES (DATA); GRAPHS  
(CHARTS); VALUES  
AVAILABILITY: \$3.20

<454>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: The Bicycle as a Transportation Mode  
Transportation Research Record 570, 3 reports  
prepared for the 53rd Annual Meeting and 6  
reports prepared for the 54th Annual Meeting  
of the Transportation Research Board, 45 p.  
1976  
KEYWORDS: BICYCLES; TRANSPORTATION; LEGISLATION;  
PLANNING; DESIGN; DEVELOPMENT; URBAN  
TRANSPORTATION; SAFETY; BIKEWAYS; TABLES  
(DATA); SIMULATION; MODELS

<455>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Planning and Programming for Transportation

<451>  
Transportation Research Record 574, papers  
presented at the 54th Annual Meeting of the  
Transportation Research Board, 58 p.  
1976  
KEYWORDS: PLANNING; TRAVEL; TRANSPORTATION; URBAN  
TRANSPORTATION; LOS ANGELES; REGIONAL  
ANALYSIS; MODELS; SAIGON (VIETNAM); PUBLIC  
TRANSPORTATION; GRAPHS (CHARTS); TABLES (DATA)  
AVAILABILITY: \$2.60

<456>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Transportation Characteristics of Truck,  
Rail, and Water Freight

Report No. PB-256000, Transportation Research  
Record No. 577, papers presented at the 54th  
Annual Meeting of the Transportation Research  
Board, 51 p.  
1976  
KEYWORDS: TRANSPORTATION; TRUCKS; RAIL  
TRANSPORTATION; WATER TRANSPORTATION; BARGES;  
INLAND WATERWAYS; CARGO TRANSPORTATION;  
TABLES (DATA); GRAPHS (CHARTS); COMMODITIES;  
FORECASTING; RAILROADS; WISCONSIN; STATE  
GOVERNMENT; COMPUTERIZED SIMULATION; RAILROAD  
CARS; PLANNING  
AVAILABILITY: Transportation Research Board  
\$2.20; NTIS

<457>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Avenue NW, Washington,  
DC 20418  
TITLE: Intercity Freight Movement by Rail and  
Highway

Transportation Research Record 511, papers  
presented at the Fifty-Third Annual Meeting  
of the Highway Research Board, 188F  
0-309-02355-6, 44 p.  
1974  
KEYWORDS: CARGO TRANSPORTATION; INTERCITY  
TRANSPORTATION; RAIL TRANSPORTATION; HIGHWAY  
TRANSPORTATION; MARKET; URBAN TRANSPORTATION;  
PLANNING; STATE GOVERNMENT; WISCONSIN  
AVAILABILITY: \$2.20

<458>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Travel Demand Forecasting

Transportation Research Record 526, papers  
presented at the Fifty-Third Annual Meeting  
of the Highway Research Board, 105 p.  
1974  
KEYWORDS: TRAVEL; DEMAND (ECONOMICS);  
FORECASTING; AIR TRANSPORTATION; URBAN  
TRANSPORTATION; PLANNING; BEHAVIOR;  
TRANSPORTATION; PASSENGER TRANSPORTATION;  
MODELS; INTERCITY TRANSPORTATION  
AVAILABILITY: \$4.40

<459>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington, DC

&lt;459&gt;

&lt;459&gt; CONT.

TITLE: Social, Economic, and Environmental  
Implications in Transportation Planning

Transportation Research Record 583, papers  
presented for the 54th 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; BEHAVIOR; MASSACHUSETTS;  
ENVIRONMENTAL IMPACT STATEMENTS; ECONOMICS;  
AUTOMOBILES; OWNERSHIP; NORTH CAROLINA; URBAN  
AREAS; LOCAL GOVERNMENT; STATE ANALYSIS  
AVAILABILITY: \$8.00

&lt;460&gt;

National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Avenue NW, Washington,  
DC 20418

TITLE: Transit Planning

Transportation Research Record 559, papers  
prepared for the 54th Annual Meeting of the  
Transportation Research Board, 132 p.

1976

KEYWORDS: PLANNING; TAXICABS; RAPID TRANSIT  
SYSTEMS; TRANSPORTATION SYSTEMS; PASSENGER  
TRANSPORTATION; BUSES (VEHICLES); COMMUTING;  
URBAN TRANSPORTATION; COMPARATIVE  
EVALUATIONS; BEHAVIOR; COSTS; TRANSPORTATION  
DISADVANTAGED; TABLES (DATA); GRAPHS  
(CHARTS); RURAL AREAS; MOBILITY  
AVAILABILITY: \$10.00

&lt;461&gt;

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 563, papers  
prepared for the 54th Annual Meeting of the  
Transportation Research Board, 96 p.

1976

KEYWORDS: PUBLIC TRANSPORTATION; PLANNING; URBAN  
TRANSPORTATION; STATE GOVERNMENT;  
LEGISLATION; CONSUMERS; ATTITUDES; ATLANTA;  
DIAL-A-RIDE; BUSES (VEHICLES); LOCAL  
GOVERNMENT; TABLES (DATA); GRAPHS (CHARTS);  
CALIFORNIA; BAY AREA RAPID TRANSIT SYSTEM;  
PARK-AND-RIDE; TRANSPORTATION DISADVANTAGED;  
INDIANA; STATE ANALYSIS  
AVAILABILITY: \$8.00

&lt;462&gt;

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  
prepared 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; HIGHWAYS;  
TRAFFIC CONTROL  
AVAILABILITY: \$2.60

&lt;463&gt;

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 54th Annual Meeting of the  
Transportation Research Board, 57 p.

1975

KEYWORDS: RAIL TRANSPORTATION; URBAN  
TRANSPORTATION; PUBLIC TRANSPORTATION; BAY  
AREA RAPID TRANSIT SYSTEM; ENERGY  
CONSUMPTION; TRANSPORTATION SYSTEMS; RAPID  
TRANSIT SYSTEMS; ECONOMICS; TABLES (DATA);  
GRAPHS (CHARTS); EUROPE; REGIONAL ANALYSIS  
AVAILABILITY: \$2.60

&lt;464&gt;

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

TITLE: Energy Effects, Efficiencies, 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 EVALUATIONS; PASSENGER  
TRANSPORTATION; CARGO TRANSPORTATION; ENERGY  
CONSERVATION; AUTOMOBILES; BUSES (VEHICLES);  
GRAPHS (CHARTS); TABLES (DATA); RAIL  
TRANSPORTATION; AIR TRANSPORTATION; BICYCLES;  
WATER TRANSPORTATION; HIGHWAY TRANSPORTATION;  
PIPELINES; SLURRY PIPELINES  
AVAILABILITY: \$8.00

&lt;465&gt;

National Academy of Sciences, National Research  
Council, Transportation Research Board,  
Commission on Sociotechnical Systems  
ADDRESS: Washington, DC

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; US  
ERDA; ENERGY DEMAND; ENERGY SUPPLIES; ENERGY  
RESOURCES; FORECASTING; ENERGY CONSERVATION;  
DEMAND (ECONOMICS); GOVERNMENT POLICIES;  
SOCIO-ECONOMIC FACTORS

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

&lt;466&gt;

National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135

TITLE: State-Of-The-Art Assessment of Electric  
and Hybrid VehiclesReport No. NCP/N1011-01, v.p.  
1978, January

<451>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Freight Transportation Characteristics  
Transportation Research Record 591, 53 p.  
1976  
KEYWORDS: CARGO TRANSPORTATION; PLANNING; DEMAND  
(ECONOMICS); URBAN TRANSPORTATION; RAIL  
TRANSPORTATION; INTERNATIONAL TRADE; TRUCKS  
AVAILABILITY: \$2.60

<452>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Air Travel and Aviation Facilities Planning  
Transportation Research Record 529, papers  
presented at the 54th Annual Meeting of the  
Transportation Research Board, 43 p.  
1975  
KEYWORDS: AIR TRANSPORTATION; AIRPORTS;  
ENVIRONMENTAL IMPACT; LAND USE; NOISE  
POLLUTION; WATER POLLUTION; AIR POLLUTION;  
SOLID WASTES; ECONOMICS; NEW YORK CITY;  
SOCIAL IMPACT ASSESSMENT; DEMAND (ECONOMICS);  
COSTS; GRAPHS (CHARTS); PLANNING; MODELS  
AVAILABILITY: \$2.00

<453>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Travel Behavior and Values  
Transportation Research Record 534, papers  
presented at the 54th Annual Meeting of the  
Transportation Research Board, 75 p.  
1975  
KEYWORDS: TRAVEL; BEHAVIOR; FORECASTING; URBAN  
TRANSPORTATION; SOCIO-ECONOMIC FACTORS;  
MATHEMATICAL MODELS; TABLES (DATA); GRAPHS  
(CHARTS); VALUES  
AVAILABILITY: \$3.20

<454>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: The Bicycle as a Transportation Mode  
Transportation Research Record 570, 3 reports  
prepared for the 53rd Annual Meeting and 6  
reports prepared for the 54th Annual Meeting  
of the Transportation Research Board, 45 p.  
1976  
KEYWORDS: BICYCLES; TRANSPORTATION; LEGISLATION;  
PLANNING; DESIGN; DEVELOPMENT; URBAN  
TRANSPORTATION; SAFETY; BIKEWAYS; TABLES  
(DATA); SIMULATION; MODELS

<455>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Planning and Programming for Transportation

<451>  
Transportation Research Record 574, papers  
presented at the 54th Annual Meeting of the  
Transportation Research Board, 58 p.  
1976  
KEYWORDS: PLANNING; TRAVEL; TRANSPORTATION; URBAN  
TRANSPORTATION; LOS ANGELES; REGIONAL  
ANALYSIS; MODELS; SAIGON (VIETNAM); PUBLIC  
TRANSPORTATION; GRAPHS (CHARTS); TABLES (DATA)  
AVAILABILITY: \$2.60

<456>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Transportation Characteristics of Truck,  
Rail, and Water Freight

Report No. PB-256000, Transportation Research  
Record No. 577, papers presented at the 54th  
Annual Meeting of the Transportation Research  
Board, 51 p.  
1976  
KEYWORDS: TRANSPORTATION; TRUCKS; RAIL  
TRANSPORTATION; WATER TRANSPORTATION; BARGES;  
INLAND WATERWAYS; CARGO TRANSPORTATION;  
TABLES (DATA); GRAPHS (CHARTS); COMMODITIES;  
FORECASTING; RAILROADS; WISCONSIN; STATE  
GOVERNMENT; COMPUTERIZED SIMULATION; RAILROAD  
CARS; PLANNING  
AVAILABILITY: Transportation Research Board  
\$2.20; NTIS

<457>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Avenue NW, Washington,  
DC 20418  
TITLE: Intercity Freight Movement by Rail and  
Highway

Transportation Research Record 511, papers  
presented at the Fifty-Third Annual Meeting  
of the Highway Research Board, 188F  
0-309-02355-6, 44 p.  
1974  
KEYWORDS: CARGO TRANSPORTATION; INTERCITY  
TRANSPORTATION; RAIL TRANSPORTATION; HIGHWAY  
TRANSPORTATION; MARKET; URBAN TRANSPORTATION;  
PLANNING; STATE GOVERNMENT; WISCONSIN  
AVAILABILITY: \$2.20

<458>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington,  
DC 20418  
TITLE: Travel Demand Forecasting

Transportation Research Record 526, papers  
presented at the Fifty-Third Annual Meeting  
of the Highway Research Board, 105 p.  
1974  
KEYWORDS: TRAVEL; DEMAND (ECONOMICS);  
FORECASTING; AIR TRANSPORTATION; URBAN  
TRANSPORTATION; PLANNING; BEHAVIOR;  
TRANSPORTATION; PASSENGER TRANSPORTATION;  
MODELS; INTERCITY TRANSPORTATION  
AVAILABILITY: \$4.40

<459>  
National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Ave. NW, Washington, DC

&lt;459&gt;

&lt;459&gt; CONT.

TITLE: Social, Economic, and Environmental  
Implications in Transportation Planning

Transportation Research Record 583, papers  
presented for the 54th 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; BEHAVIOR; MASSACHUSETTS;  
ENVIRONMENTAL IMPACT STATEMENTS; ECONOMICS;  
AUTOMOBILES; OWNERSHIP; NORTH CAROLINA; URBAN  
AREAS; LOCAL GOVERNMENT; STATE ANALYSIS

AVAILABILITY: \$8.00

&lt;460&gt;

National Academy of Sciences, National Research  
Council, Transportation Research Board  
ADDRESS: 2101 Constitution Avenue NW, Washington,  
DC 20418

TITLE: Transit Planning

Transportation Research Record 559, papers  
prepared for the 54th Annual Meeting of the  
Transportation Research Board, 132 p.

1976

KEYWORDS: PLANNING; TAXICABS; RAPID TRANSIT  
SYSTEMS; TRANSPORTATION SYSTEMS; PASSENGER  
TRANSPORTATION; BUSES (VEHICLES); COMMUTING;  
URBAN TRANSPORTATION; COMPARATIVE  
EVALUATIONS; BEHAVIOR; COSTS; TRANSPORTATION  
DISADVANTAGED; TABLES (DATA); GRAPHS  
(CHARTS); RURAL AREAS; MOBILITY

AVAILABILITY: \$10.00

&lt;461&gt;

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 563, papers  
prepared for the 54th Annual Meeting of the  
Transportation Research Board, 96 p.

1976

KEYWORDS: PUBLIC TRANSPORTATION; PLANNING; URBAN  
TRANSPORTATION; STATE GOVERNMENT;  
LEGISLATION; CONSUMERS; ATTITUDES; ATLANTA;  
DIAL-A-RIDE; BUSES (VEHICLES); LOCAL  
GOVERNMENT; TABLES (DATA); GRAPHS (CHARTS);  
CALIFORNIA; BAY AREA RAPID TRANSIT SYSTEM;  
PARK-AND-RIDE; TRANSPORTATION DISADVANTAGED;  
INDIANA; STATE ANALYSIS

AVAILABILITY: \$8.00

&lt;462&gt;

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  
prepared 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; HIGHWAYS;  
TRAFFIC CONTROL

AVAILABILITY: \$2.60

&lt;463&gt;

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 54th Annual Meeting of the  
Transportation Research Board, 57 p.

1975

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

AVAILABILITY: \$2.60

&lt;464&gt;

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

TITLE: Energy Effects, Efficiencies, 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 EVALUATIONS; PASSENGER  
TRANSPORTATION; CARGO TRANSPORTATION; ENERGY  
CONSERVATION; AUTOMOBILES; BUSES (VEHICLES);  
GRAPHS (CHARTS); TABLES (DATA); RAIL  
TRANSPORTATION; AIR TRANSPORTATION; BICYCLES;  
WATER TRANSPORTATION; HIGHWAY TRANSPORTATION;  
PIPELINES; SLURRY PIPELINES

AVAILABILITY: \$8.00

&lt;465&gt;

National Academy of Sciences, National Research  
Council, Transportation Research Board,  
Commission on Sociotechnical Systems  
ADDRESS: Washington, DC

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; US  
ERDA; ENERGY DEMAND; ENERGY SUPPLIES; ENERGY  
RESOURCES; FORECASTING; ENERGY CONSERVATION;  
DEMAND (ECONOMICS); GOVERNMENT POLICIES;  
SOCIO-ECONOMIC FACTORS

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

&lt;466&gt;

National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135

TITLE: State-Of-The-Art Assessment of Electric  
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 KEYWORDS: ELECTRIC VEHICLES; HYBRID  
 ELECTRIC-POWERED VEHICLES; EQUIPMENT;  
 TESTING; TABLES (DATA); BATTERIES; SURVEYS;  
 PERFORMANCE; ELECTRIC VEHICLE RANGE; ENERGY  
 CONSUMPTION; RELIABILITY  
 AVAILABILITY: NTIS

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 ADDRESS: Cleveland, OH  
 TITLE: Twelve State-of-the-Art Individual  
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 Transportation Energy Conservation  
 KEYWORDS: ELECTRIC VEHICLES; HYBRID  
 ELECTRIC-POWERED VEHICLES; TESTING; DRIVING  
 CYCLE; ENERGY CONSUMPTION; PERFORMANCE;  
 DESIGN; BATTERIES; TABLES (DATA); GRAPHS  
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 AVAILABILITY: NTIS

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 TITLE: 1975-76 Statistics on Pupil Transportation  
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 KEYWORDS: STATE ANALYSIS; EXPENDITURES; BUSES  
 (VEHICLES); STATISTICS; OWNERSHIP; SCHOOLS;  
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 TITLE: Potential for Energy Conservation in the  
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 204 p.  
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 SPONSOR: U.S. Dept. of Interior  
 KEYWORDS: ENERGY CONSERVATION; INDUSTRIAL SECTOR;  
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 TABLES (DATA); FORECASTING; HEAT PUMPS;  
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 ADDRESS: 1221 Ave. of the Americas, New York, NY  
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 TITLE: 1978 National Petroleum News Factbook Issue  
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 ENERGY DEMAND; AIR POLLUTION; ADVERTISING;  
 GASOLINE; PETROLEUM; UNLEADED AUTOMOTIVE FUELS

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 Nelson, P.A.; Chilenskas, A.A.; Steinhilber, R.K.  
 Argonne National Laboratory, Chemical Engineering  
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 ADDRESS: 9700 South Cass Avenue, Argonne, IL  
 60439  
 TITLE: The Need for Development of High-Energy  
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Report No. ARL-8075, 24 p.  
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 SPONSOR: U.S. Atomic Energy Commission  
 KEYWORDS: BATTERIES; AIR POLLUTION; FORECASTING;  
 LITHIUM-SULFUR BATTERIES; ELECTRIC VEHICLES;  
 ECONOMIC ANALYSIS; COMPARATIVE EVALUATIONS  
 AVAILABILITY: NTIS

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 New York State Dept. of Transportation, Planning  
 Division  
 ADDRESS: State Campus, Albany, NY 12232  
 TITLE: Public Opinion Survey on Energy and  
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 SPONSOR: U.S. Dept. of Transportation  
 KEYWORDS: SURVEYS; NEW YORK; ENERGY CONSERVATION;  
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 GROUPS; SEX; ENERGY POLICY; PUBLIC OPINION;  
 MASS TRANSPORTATION; INCENTIVES;  
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 Federal Energy Administration, Office of Energy  
 Information and Analysis, Consumption Studies  
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 ADDRESS: 12th and Pennsylvania Avenue NW, Old  
 Post Office Building, Room 306, Washington,  
 DC 20461  
 TITLE: Lifestyles and Household Energy Use: 1973  
 and 1975 National Surveys, Code Book and  
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Report No. PB-272449, FEA/DF-77/001A, 233 p.  
 1977, September  
 KEYWORDS: SURVEYS; RESIDENTIAL SECTOR; ENERGY  
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 AVAILABILITY: NTIS

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 ADDRESS: Washington, DC  
 TITLE: Balancing Requirements for World Oil and  
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Chemical Engineering Progress, 70(10), 36-48  
 1974, October  
 KEYWORDS: ENERGY DEMAND; PETROLEUM; ENERGY  
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 FORECASTING; ENERGY CONSUMPTION



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 TITLE: Twelve State-of-the-Art Individual  
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 CYCLE; ENERGY CONSUMPTION; PERFORMANCE;  
 DESIGN; BATTERIES; TABLES (DATA); GRAPHS  
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 TITLE: 1975-76 Statistics on Pupil Transportation

3 p.

KEYWORDS: STATE ANALYSIS; EXPENDITURES; BUSES  
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204 p.

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Nelson, P.A.; Chilenskas, A.A.; Steinhilber, R.K.  
 Argonne National Laboratory, Chemical Engineering  
 Division  
 ADDRESS: 9700 South Cass Avenue, Argonne, IL  
 60439  
 TITLE: The Need for Development of High-Energy  
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1974, November

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Neve, A.J.  
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Preliminary Research Report No. 135, 47 p.

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Niccoletti, W.  
 Federal Energy Administration, Office of Energy  
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 TITLE: Lifestyles and Household Energy Use: 1973  
 and 1975 National Surveys, Code Book and  
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 CONSUMPTION; COSTS; ELECTRIC POWER DEMAND;  
 NATURAL GAS; FUEL OIL; SPACE HEATING; AIR  
 CONDITIONING; WATER HEATERS; LIFE STYLE;  
 AUTOMOBILES; APPLIANCES; TABLES (DATA);  
 REGIONAL ANALYSIS; COSTS; POPULATION  
 (STATISTICS); OWNERS; ATTITUDES; ENERGY  
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Nichols, M.W.  
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 ADDRESS: Washington, DC  
 TITLE: Balancing Requirements for World Oil and  
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 Nicolaides, G.C.; Murawski, C.A.  
 General Motors Corp., Research Laboratories  
 ADDRESS: Warren, MI 48090  
 TITLE: Analysis of Preference for Mixed-Mode Transit  
 Reprint from Traffic Quarterly, July 1977,  
 472-496; also available as Research  
 Publication No. GMR-2255  
 1977, July  
 KEYWORDS: ATTITUDES; URBAN TRANSPORTATION;  
 COMMUTING; MODELS; TABLES (DATA); GRAPHS  
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 MIXED-MODE TRANSIT  
 AVAILABILITY: General Motors Corp., Research  
 Laboratories, Warren MI 48090 for GMR-2255

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 ADDRESS: 31 Wallack Lane, Stamford, CT 06902  
 TITLE: Travel Market Yearbook: 1976/1977  
 Annual publication, 128 p.  
 1976  
 KEYWORDS: TRAVEL; MARKET; AUTOMOBILES;  
 INTERNATIONAL ANALYSIS; TOURISM; ADVERTISING;  
 FORECASTING; TRANSPORTATION; TAXES; AIR  
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 PASSENGER TRANSPORTATION; BUSES (VEHICLES);  
 SERVICES; TABLES (DATA)  
 AVAILABILITY: \$26.00

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 Forman, T.A.  
 U.S. Postal Service  
 ADDRESS: Washington, DC  
 TITLE: Electric-Flywheel Vehicle for Postal  
 Service Applications

Paper No. 780297, presented at the Society of  
 Automotive Engineers' Congress and  
 Exposition, Cobo Hall, Detroit, Michigan,  
 February 27 - March 3, 1978, 4 p.  
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 KEYWORDS: ELECTRIC VEHICLES; HYBRID  
 ELECTRIC-POWERED VEHICLES; FLYWHEELS;  
 AUTOMOTIVE FLEETS; ENERGY CONSERVATION;  
 UTILIZATION; POSTAL SERVICE  
 AVAILABILITY: Society of Automotive Engineers  
 Inc., 400 Commonwealth Drive, Warrendale, PA  
 15096 \$2.50

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 North Atlantic Treaty Organization, Committee on  
 the Challenges of Modern Society  
 TITLE: Proceedings of the Fourth International  
 Symposium on Automotive Propulsion Systems.  
 Volumes I and II

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 SPONSOR: U.S. Dept. of Energy, Division of  
 Transportation Energy Conservation  
 KEYWORDS: CONFERENCES; PROPULSION; AUTOMOBILES;  
 GAS TURBINES; AUTOMOTIVE FUELS; FUELS; DIESEL  
 ENGINES; STIRLING ENGINES; RANKINE CYCLE  
 ENGINES; ELECTRIC VEHICLES; HYBRID  
 ELECTRIC-POWERED VEHICLES; STRATIFIED CHARGE  
 ENGINES; SPARK IGNITION ENGINES; AUTOMOTIVE  
 EMISSIONS; POWER TRAIN SYSTEMS  
 AVAILABILITY: NTIS (when available)

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 Library  
 ADDRESS: Evanston, IL 11973  
 TITLE: Bibliography for Transportation Energy  
 Conservation

Report No. ANL-76-XX-7, 64 p.  
 1976, May  
 SPONSOR: Argonne National Laboratory  
 KEYWORDS: BIBLIOGRAPHIES; TRANSPORTATION;  
 AUTOMOBILES; MASS TRANSPORTATION; AIRCRAFT;  
 TRUCKS; RAILROADS; BARGES; SHIPS; MARINE  
 TRANSPORTATION; RAIL TRANSPORTATION; AIR  
 TRANSPORTATION; PIPELINE TRANSPORTATION;  
 ENERGY CONSERVATION  
 AVAILABILITY: NTIS

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 Obinami, P.C.  
 Tri-State Regional Planning Commission  
 ADDRESS: New York, NY  
 TITLE: Analysis of User Response to the 1975 New  
 York City Transit-Fare Increase (abridgment)

Paper published in Transportation Research Record  
 625, 12-14  
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 SPONSOR: U.S. Dept. of Transportation, Federal  
 Highway Administration; U.S. Dept. of  
 Transportation, Urban Mass Transportation  
 Administration; U.S. Dept. of Housing and  
 Urban Development  
 KEYWORDS: NEW YORK CITY; TRANSPORTATION SYSTEMS;  
 PASSENGER TRANSPORTATION; COSTS; MOBILITY;  
 SURVEYS; TABLES (DATA); ATTITUDES  
 AVAILABILITY: National Academy of Sciences,  
 Transportation Research Board, 2101  
 Constitution Ave. NW, Washington, DC 20418  
 \$3.20 for Transportation Research Record 625

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 Odonoi, A.R.; Kivestu, P.  
 Massachusetts Institute of Technology, Flight  
 Transportation Laboratory  
 ADDRESS: Cambridge, MA 02139  
 TITLE: A Handbook for the Estimation of Airside  
 Delays at Major Airports (Quick Approximation  
 Method)

Report No. NASA CR-2644, 81 p.  
 1976, June  
 SPONSOR: National Aeronautics and Space  
 Administration, Langley Research Center  
 KEYWORDS: HANDBOOKS; AIRPORTS; DELAYS; COMPUTER  
 PROGRAMS; GRAPHS (CHARTS); OPERATION;  
 CAPACITY; PEAK-HOUR DEMAND; TRAFFIC CONTROL  
 AVAILABILITY: NTIS

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 R.; Ziemann, J.C.; Shugart, H.H.  
 Georgia, University of, Institute of Ecology;  
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 Community and Area Development  
 TITLE: Totality Indexes for Evaluating  
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Report presented at the 54th Annual Meeting of  
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 KEYWORDS: ENVIRONMENTAL IMPACT; HIGHWAYS;  
 CONSTRUCTION; GEORGIA; PLANNING; STATE  
 GOVERNMENT; GOVERNMENT POLICIES; PUBLIC  
 OPINION



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 AVAILABILITY: National Academy of Sciences,  
 Transportation Research Board, 2101  
 Constitution Ave NW, Washington, DC 20418  
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Oil and Gas Journal, 75(31), 51-54  
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 KEYWORDS: COAL; COAL GASIFICATION; ALTERNATE  
 FUELS; LOW BTU GAS; U-GAS PROCESS; DIAGRAMS;  
 FUEL OIL; NATURAL GAS; TABLES (DATA); ASHES;  
 PILOT PLANTS; DEMONSTRATION PLANTS

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 Olsen, P.J.; Westley, G.W.  
 Oak Ridge National Laboratory, Energy Division,  
 Regional and Urban Studies Section; Oak Ridge  
 National Laboratory, Computer Sciences  
 Division  
 ADDRESS: Oak Ridge, TN 37830  
 TITLE: Synthetic Measures of Truck Operating  
 Times Between the Metropolitan Centers of BSA  
 Economic Areas: 1950, 1960, and 1970, with  
 Projections for 1980

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 Paul, P.W.; Negreanu, M.J.  
 Carnegie-Mellon University, Mechanical  
 Engineering Dept.  
 ADDRESS: Pittsburgh, PA  
 TITLE: Applied Studies in Advanced Boiler  
 Technology for Rankine Cycle Power Systems

Report No. ORNL-NSF-EP-78, 76 p.  
 1975, January  
 SPONSOR: National Science Foundation, BANN Program  
 KEYWORDS: TRUCKS; URBAN AREAS; REGIONAL ANALYSIS;  
 TRANSPORTATION; DISTANCE; VELOCITY; HIGHWAYS;  
 TABLES (DATA); HISTORY; FORECASTING;  
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 MARKET; GROWTH

Report No. COO/2633-3, v-p.  
 1978, February  
 SPONSOR: U.S. Dept. of Energy, Division of  
 Transportation Energy Conservation  
 KEYWORDS: BOILERS; RANKINE CYCLE POWER SYSTEMS;  
 DESIGN; COMPARATIVE EVALUATIONS; TESTING;  
 VAPOR GENERATORS; MODELS; SIMULATION; DIAGRAMS  
 AVAILABILITY: NTIS

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 Opinion Research Corp.  
 ADDRESS: North Harrison Street, Princeton, NJ  
 08540  
 TITLE: Driving and Energy Conservation.  
 Highlight Report. Volume III

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 Hornberger, M.L.; Likos, W.E.; Pullman, B.  
 Santa Clara University, Dept. of Mechanical  
 Engineering  
 ADDRESS: Santa Clara, CA 95053  
 TITLE: Characterization and Research  
 Investigation of Methanol and Methyl Fuels

Report No. PP-261162, FEA/D-76/483, 28 p.  
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 SPONSOR: Federal Energy Administration, Office of  
 Energy Conservation and Environment  
 KEYWORDS: ENERGY CONSERVATION; COMMUTING;  
 SURVEYS; BEHAVIOR; AUTOMOBILE DRIVERS;  
 REGIONAL ANALYSIS; ATTITUDES; ENERGY  
 CONSUMPTION; CARPOOLING; GASOLINE; FUEL  
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 AVAILABILITY: NTIS

Report No. COO-1258-1, M.E. 77-1, 108 p.  
 1977, August  
 SPONSOR: U.S. Environmental Protection Agency,  
 Motor Vehicle Emission Laboratory; Energy  
 Research and Development Administration,  
 Division of Transportation Energy Conservation  
 KEYWORDS: ALTERNATE FUELS; METHANOL; COMPARATIVE  
 EVALUATIONS; EMISSIONS; EFFICIENCY; FUEL  
 ECONOMY; GASOLINE; PERFORMANCE; COMPUTERIZED  
 SIMULATION; GRAPHS (CHARTS); TABLES (DATA);  
 TESTING  
 AVAILABILITY: NTIS

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 Ossenbruggen, P.J.; Fishman, H.W.  
 New Hampshire University of, College of  
 Engineering and Physical Sciences; Penney  
 (J.C.) Co. Inc., Real Estate Dept.  
 ADDRESS: UNH, Durham, NH; JCPC, New York, NY  
 TITLE: Impact of Transit Line Extension on  
 Residential Land Use

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 Penner, P.S.  
 Illinois, University of, Center for Advanced  
 Computation  
 ADDRESS: Urbana, IL 61801  
 TITLE: The Dollar, Energy and Labor Intensity of  
 an Electric Commuter Railroad

Paper published in Transportation Research Record  
 627, 10-13  
 1977  
 SPONSOR: U.S. Dept. of Transportation, Urban Mass  
 Transportation Administration  
 KEYWORDS: LAND USE; RESIDENTIAL SECTOR; RAPID  
 TRANSIT SYSTEMS; TRANSPORTATION; REGULATIONS;  
 LAND DEVELOPMENT  
 AVAILABILITY: National Academy of Sciences,  
 Transportation Research Board, 2101  
 Constitution Ave. NW, Washington, DC 20418  
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 1974, September  
 KEYWORDS: LABOR INTENSITY; TRANSPORTATION  
 SYSTEMS; RAIL TRANSPORTATION; ENERGY  
 CONSUMPTION; FINANCIAL DATA; LOAD FACTOR;  
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 Patel, J.G.  
 Institute of Gas Technology  
 ADDRESS: Chicago, IL  
 TITLE: Clean Fuel from Coal Is Goal of U-Gas  
 Process

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 Permut, H.; Vuchic, V.R.  
 Chicago Regional Transportation Authority;  
 Pennsylvania, University of, Dept. of  
 Engineering  
 ADDRESS: CMTA, Chicago, IL; UP, Philadelphia, PA  
 TITLE: Evaluation of Alternative Station Spacing  
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Constitution Ave. NW, Washington, DC 20418  
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Petracek, S.J.

Stanford Research Institute

ADDRESS: Menlo Park, CA 94025

TITLE: Energy Study of Railroad Freight  
Transportation. Volume 3: Regulation and  
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SRI Project TCU 5419, 101 p.

1977, August

SPONSOR: Energy Research and Development  
AdministrationKEYWORDS: REGULATIONS; ENERGY CONSUMPTION;  
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ECONOMICS; COSTS

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Petrocelli, A.W.; Kennedy, J.H.

Yardney Electric Corp.

ADDRESS: Pawcatuck, CT

TITLE: The Nickel-Zinc Battery: A Viable  
Alternative for Vehicle PoweringPaper presented at the Fourth International  
Electric Vehicle Symposium (sponsored by the  
Electric Vehicle Council and the  
International Union of Producers and  
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Dusseldorf, Germany, August 31 - September 2,  
1976, 28 p.

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KEYWORDS: NICKEL-ZINC BATTERIES; ELECTRIC  
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COMPARATIVE EVALUATIONS; LEAD-ACID BATTERIES;  
GRAPHS (CHARTS)AVAILABILITY: Electric Vehicle Council, 90 Park  
Ave., New York, NY 10016 \$1.50

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ADDRESS: 1821 S. Sheridan Road, Tulsa, OK 74101

TITLE: Petroleum/2000

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Issue, 538 p.

1977, August

KEYWORDS: PETROLEUM; FORECASTING; EXPLORATION;  
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NATURAL GAS; INTERNATIONAL RELATIONS

AVAILABILITY: \$6.00

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Phoebe, C.H.

Gulf Research and Development Co.

ADDRESS: Pittsburgh, PA 15230

TITLE: Passenger Car Fuel Economy in Short Trip  
Operation. Technical Progress Report for

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HIGHWAY TRANSPORTATION; ENERGY STORAGE;  
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AUTOMOBILE OCCUPANCY

AVAILABILITY: NTIS

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Pigman, J.G.; Agent, K.R.; Hayes, J.G.; Zegeer,  
C.V.Kentucky Dept. of Transportation, Bureau of  
HighwaysTITLE: Optimal Highway Safety Improvement  
Investments by Dynamic ProgrammingReport presented at the 58th Annual Meeting of  
the Transportation Research Board, published  
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1976KEYWORDS: HIGHWAYS; SAFETY; PLANNING; MANAGEMENT;  
INVESTMENTS; OPTIMIZATIONAVAILABILITY: National Academy of Sciences,  
Transportation Research Board, 2101

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ADDRESS: 3314 Mercer St., Houston, TX 77027

TITLE: Pipeline and Underground Utilities  
Construction: Annual Contractors Issue 1978

Pipeline and Underground Utilities Construction,

33(7), v.p.

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

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Popular Science

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

TITLE: Motorcamping Handbook 1977

136 p.

1977, Spring

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

AVAILABILITY: \$1.50

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Pouliot, H.W.; Robinson, C.W.; Delameter, W.R.

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ADDRESS: Livermore, CA

TITLE: A Variable-Displacement Spark-Ignition  
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Final Report, Report No. SAND 77-8299, 108 p.

1978, June

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy ConservationKEYWORDS: SPARK IGNITION ENGINES; VARIABLE  
DISPLACEMENT ENGINES; EXHAUST RECIRCULATION

&lt;498&gt; COPT.

SYSTEMS: AUTOMOTIVE EMISSIONS; FUEL ECONOMY;  
MEASUREMENT; TESTING; DRIVING CYCLE; URBAN  
TRANSPORTATION; MECHANICS; GRAPHS (CHARTS);  
DIAGRAMS; HYDROCARBONS; NITROGEN OXIDES  
AVAILABILITY: GPO, Stock No. 061-000-00108-5

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Powell, S.F., III; Rosenberg, W.  
U.S. Dept. of Transportation, Transportation  
Systems Center  
ADDRESS: Wendall Square, Cambridge, MA 02142  
TITLE: The Advisability of Regulating Electric  
Vehicles for Energy Conservation

Report No. PB-260667, DOT-TSC-OST-76-37, v.p.  
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;  
PERFORMANCE; LIFE-CYCLE COST; ENERGY  
CONSERVATION; GOVERNMENT POLICIES; FUEL  
CONSUMPTION; EFFICIENCY; TABLES (DATA);  
GRAPHS (CHARTS); COMPARATIVE EVALUATIONS;  
ECONOMICS; COSTS; VANS; REGULATIONS; INTERNAL  
COMBUSTION ENGINES; ENERGY CONSUMPTION; MARKET  
AVAILABILITY: NTIS

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Powell, J.D.; Hubbard, M.  
Stanford University, Dept. of Aeronautics and  
Astronautics  
ADDRESS: Stanford, CA 94305  
TITLE: Closed-Loop Control of Internal Combustion  
Engine Exhaust Emissions

Report No. PB-239850, 63 p.

1974, February  
SPONSOR: U.S. Dept. of Transportation, Office of  
Systems Engineering, University Research  
Program  
KEYWORDS: AUTOMOTIVE EMISSIONS; INTERNAL  
COMBUSTION ENGINES; FUEL-AIR RATIO; CONTROL  
EQUIPMENT; DESIGN; COMPARATIVE EVALUATIONS  
AVAILABILITY: NTIS

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Pozdema, R.J.  
Stanford Research Institute  
ADDRESS: 333 Ravenswood Avenue, Menlo Park, CA  
94025

TITLE: Forecasts of Aircraft Activity by  
Altitude, World Region, and Aircraft Type

Report No. FAA-AP-76-18, Forecasts of Worldwide  
Aviation Activity, 132 p.

1976, November  
SPONSOR: U.S. Dept. of Transportation, Federal  
Aviation Administration, Office of Aviation  
Policy  
KEYWORDS: FORECASTING; AIRCRAFT; ECONOMETRIC  
MODELS; REGIONAL ANALYSIS; OPERATING COSTS;  
INTERNATIONAL TRAVEL; PASSENGER  
TRANSPORTATION; TABLES (DATA); GROWTH; DATA  
BASES; STATISTICS; CARGO TRANSPORTATION;  
HISTORY; MODELS  
AVAILABILITY: NTIS

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Pratt (R.H.) Associates Inc.  
ADDRESS: 10400 Connecticut Avenue, Kensington, MD  
20795

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TITLE: The Potential for Transit as an Energy  
Saving Option

1975, November

SPONSOR: Federal Energy Administration  
KEYWORDS: PUBLIC TRANSPORTATION; URBAN  
TRANSPORTATION; ENERGY CONSUMPTION; ENERGY  
CONSERVATION; VEHICLE MILES TRAVELED;  
AUTOMOBILES; REGIONAL ANALYSIS; PASSENGER  
TRANSPORTATION; GRAPHS (CHARTS); TABLES  
(DATA); MODELS; EFFICIENCY; BALTIMORE  
(MARYLAND); CHICAGO; SAN DIEGO; ALBUQUERQUE;  
SOCIO-ECONOMIC FACTORS; MASS TRANSPORTATION;  
GOVERNMENT POLICIES; BUSES (VEHICLES); RAIL  
TRANSPORTATION; STATE ANALYSIS

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Presidential Task Force on Reform of Federal  
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ADDRESS: Washington, DC  
TITLE: Report of the Presidential Task Force on  
Reform of Federal Energy Administration  
Regulations. Volume 1 and Volume 2,  
Appendices

1976, December

KEYWORDS: REGULATIONS; LEGISLATION; GOVERNMENT  
POLICIES; HISTORY; PROPANE; NATURAL GAS; FUEL  
OIL; PETROLEUM INDUSTRY; IMPORTS;  
ALLOCATIONS; ENERGY SUPPLIES; PETROLEUM;  
PRICES; COSTS; ENERGY SHORTAGES; REFINING;  
LEGAL ASPECTS; US PEA; CONSUMERS; TABLES  
(DATA)

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Public Technology Inc.; Urban Consortium for  
Technology Initiatives, Transportation Task  
Force  
ADDRESS: 1140 Connecticut Avenue NW, Washington,  
DC 20036  
TITLE: Transportation Needs Summary

32 p.

1976, September  
SPONSOR: U.S. Dept. of Transportation, Urban Mass  
Transportation Administration; U.S. Dept. of  
Transportation, Federal Highway Administration  
KEYWORDS: TRANSPORTATION; RESEARCH; ASPHALTS;  
TRANSPORTATION SYSTEMS; PARATRANSIT;  
HIGHWAYS; BUSES (VEHICLES); PLANNING; MASS  
TRANSPORTATION; AIR TRANSPORTATION; TRAFFIC  
CONTROL

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Pucher, J.; Rothenberg, J.  
Massachusetts Institute of Technology, Dept. of  
Urban Studies and Planning  
ADDRESS: Cambridge, MA 02139  
TITLE: Pricing in Urban Transportation: A Survey  
of Empirical Evidence on the Elasticity of  
Travel Demand

Report No. MIT 76-014, 133 p.

1976, July

KEYWORDS: URBAN TRANSPORTATION; PRICES; RATES  
(COSTS); MODELS; ELASTICITY (ECONOMICS);  
GASOLINE; DEMAND (ECONOMICS); ENERGY  
CONSERVATION; INCOME; TABLES (DATA); ENERGY  
CONSUMPTION

AVAILABILITY: MIT, Center for Transportation  
Studies, 77 Massachusetts Avenue, Cambridge,  
MA 02139 \$6.00

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Pucher, J.R.

Massachusetts Institute of Technology, Dept. of  
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ADDRESS: Cambridge, MA 02139

TITLE: Projections of 1980 Freight Demands for  
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Report No. DOT-TST-76T-40, 130 p.

1976, September

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

KEYWORDS: FORECASTING; RAIL TRANSPORTATION;

RAILROADS; MIDWESTERN STATES; CARGO

TRANSPORTATION; COSTS; TABLES (DATA); MAPS;

COMMODITIES; INPUT-OUTPUT ANALYSIS; REGIONAL

ANALYSIS; HISTORY

AVAILABILITY: NTIS

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Purdue University, Institute for

Interdisciplinary Engineering Studies

ADDRESS: West Lafayette, IN

TITLE: Opportunity and Risk Assessment of the  
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1978, January

SPONSOR: U.S. Dept. of Energy, Division of  
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KEYWORDS: ELECTRIC VEHICLES; HYBRID

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ENERGY DEMAND; COSTS; PERFORMANCE; TABLES

(DATA); ELECTRIC VEHICLE RANGE;

TRANSPORTATION; PETROLEUM; ENERGY

CONSERVATION; TECHNOLOGY ASSESSMENT;

INSTITUTIONAL FACTORS; SAFETY

AVAILABILITY: NTIS

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Pushkarev, R.S.; Zupan, J.M.

Regional Plan Association

ADDRESS: 235 East 45 Street, New York 10017

TITLE: Power for the MTA: An Examination of  
Future Ridership, Service, and Electric Power  
Requirements for Metropolitan Transportation  
Authority Facilities

NPA Bulletin 126, 90 p.

1977, June

SPONSOR: New York State Power Authority

KEYWORDS: NEW YORK CITY; RAIL TRANSPORTATION;

ELECTRIC POWER DEMAND; EMPLOYMENT; COMMUTERS;

PUBLIC TRANSPORTATION; URBAN TRANSPORTATION;

AUTOMOBILES; REGIONAL ANALYSIS; PEAK-HOUR

DEMAND; ELECTRIC VEHICLES; GRAPHS (CHARTS);

RAPID TRANSIT SYSTEMS; TABLES (DATA);

PLANNING; EQUIPMENT; SUBWAYS; AIR

CONDITIONING; REGENERATIVE BRAKING; MASS

TRANSPORTATION

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Rabe, F.T.

Environmental Impact Center Inc.

ADDRESS: 55 Chapel Street, Newton, MA 02158

TITLE: Uncertainties in Estimates of Fleet  
Average Fuel Economy: A Statistical  
Evaluation

Report No. DOT-TSC-OST-77-32, 66 p.

1977, June

SPONSOR: U.S. Dept. of Transportation, Office of  
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Secretary for Systems Development and  
Technology; U.S. Dept. of Transportation,  
Transportation Systems CenterKEYWORDS: AUTOMOTIVE FLEETS; FUEL ECONOMY; FUEL  
CONSUMPTION; TABLES (DATA); STRATIFICATION;  
ESTIMATES; STATISTICAL ANALYSIS; TESTING  
AVAILABILITY: NTIS

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Rabe, F.T.

Environmental Impact Center Inc.

ADDRESS: 55 Chapel Street, Newton, MA 02158

TITLE: Study Design for a Method of Projecting  
Vehicle Miles of Travel

Report No. DOT-TSC-OST-77-25, 56 p.

1977, August

SPONSOR: U.S. Dept. of Transportation,  
Transportation Systems 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: NTIS

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Rabe, F.T.

Environmental Impact Center Inc.

ADDRESS: 55 Chapel Street, Newton, MA 02158

TITLE: Dynamic Models of the U.S. Automobile Fleet

Report No. DOT-TSC-OST-77-26, 46 p.

1977, August

SPONSOR: U.S. Dept. of Transportation,  
Transportation Systems 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: NTIS

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Raschbichler, H.G.

Scitran

ADDRESS: Box 5456, Santa Barbara, CA 93108

TITLE: Technical and Economical Considerations of  
the Use of Self-Supporting Plastic Sandwich  
Constructions in Electrical Vehicles

Report No. N76-14205, NASA-TT-F-16824, 15 p.:

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Zeitschrift Ausg. A, 94(11), 679-682

1975, December

SPONSOR: National Aeronautics and Space

Administration

KEYWORDS: ELECTRIC VEHICLES; PLASTICS; ECONOMIC

ANALYSIS; PRODUCTION; DESIGN

AVAILABILITY: NTIS

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Rechel, R.

TITLE: Transportation Policies and Energy  
Conservation

An Issue Report, 71 p.

1976

KEYWORDS: TRANSPORTATION; ENERGY CONSERVATION;

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CHOICE; FUEL CONSUMPTION; REGULATIONS;

HIGHWAY TRANSPORTATION; SERVICES; CARGO

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TRANSPORTATION; PUBLIC TRANSPORTATION; RAIL  
TRANSPORTATION; URBAN TRANSPORTATION; AIR  
TRANSPORTATION; WATER TRANSPORTATION;  
PIPELINE TRANSPORTATION; ECONOMIC IMPACT;  
EXPENDITURES  
AVAILABILITY: The Conservation Foundation, 1717  
Massachusetts Avenue, N.W., Washington, DC  
20036

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Recker, 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; GMCRL, Warren, MI 48090  
TITLE: A Non-Compensatory Model of Transportation  
Behavior Based on Sequential Consideration of  
Attributes

Report No. GNR-2621, 23 p.

1978, January 10

KEYWORDS: TRANSPORTATION; MODELS; BEHAVIOR;  
DECISIONS; ATTITUDES; SHOPPING TRIPS; URBAN  
TRANSPORTATION; VEHICLES

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Recreation Vehicle Industry Association  
ADDRESS: Box 204, 14650 Lee Rd., Chantilly, VA  
22021  
TITLE: RV Financial Facts

Quarterly publication, approximately 4 p.

KEYWORDS: FINANCIAL DATA; RECREATION VEHICLES;  
PRODUCTION; SALES; INDUSTRIES; INFORMATION

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Recreation Vehicle Industry Association  
ADDRESS: P.O. Box 204, 14650 Lee Road, Chantilly,  
VA 22021  
TITLE: Recreation Vehicle Figures, Facts and  
Forecasts: 1961 - 1981

Paper presented at seminar held at the Essex  
House Hotel, New York, NY, on March 31, 1977,  
11 p.

1977

SPONSOR: Mitchell, Hutchins Inc.

KEYWORDS: RECREATION VEHICLES; FORECASTING;  
TRAILERS; CAMPERS; MOTOR HOMES; TABLES  
(DATA); SALES

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Recreation Vehicle Industry Association,  
Marketing and Public Relations Departments  
ADDRESS: 14650 Lee Road, Chantilly, VA 22020  
TITLE: Facts and Trends 1977: 5th Annual  
Historical Review of Production and Shipments  
of the Recreation Vehicle Industry

Annual publication, 9 p.

1978

KEYWORDS: RECREATION; FORECASTING; RECREATION  
VEHICLES; INDUSTRIES; PRICES; PRODUCTION;  
SALES; MARKET; TABLES (DATA); GRAPHS  
(CHARTS); ENERGY DEMAND; MOTOR HOMES;  
TRAILERS; CAMPERS; TRUCKS; REGIONAL ANALYSIS

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U.S. Dept. of Transportation, Transportation  
Systems Center  
ADDRESS: Kendall Square, Cambridge, MA 02142  
TITLE: A Study of the Costs and Benefits  
Associated with AVH

Report No. PB-266293, UMTA-NA-06-0041-77-1,  
DOT-TSC-UMTA-77-5, 256 p.

1977, February

SPONSOR: U.S. Dept. of Transportation, Urban Mass  
Transportation Administration, Office of  
Technology Development and Deployment  
KEYWORDS: TRANSPORTATION; TECHNOLOGY; COSTS;  
MAINTENANCE; OPERATING COSTS; BUSES  
(VEHICLES); TAXICABS; BENEFIT COST ANALYSIS;  
TABLES (DATA); GRAPHS (CHARTS); ENERGY  
CONSERVATION; MONITORING; AUTOMATIC VEHICLE  
MONITORING; URBAN TRANSPORTATION; AUTOMOTIVE  
FLEETS

AVAILABILITY: NTIS

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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;  
U.S. Dept. of Transportation, Urban Mass  
Transportation Administration; Ford  
Foundation; Rockefeller Foundation  
KEYWORDS: URBAN AREAS; PUBLIC TRANSPORTATION;  
COSTS; BUSES (VEHICLES); RAPID TRANSIT  
SYSTEMS; COMMUTERS; COMMUNITY DEVELOPMENT;  
LAND USE; PHOTOGRAPHS; GRAPHS (CHARTS)

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Regueiro, J.F.  
John Deere Product Engineering Center  
ADDRESS: Moline, IL 61265  
TITLE: Engine Developments and Agricultural  
Equipment Fuel Consumption Trends

Paper No. 760853, published in SAE SP-411, 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  
15096 for SAE SP-411

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Reichman, S.  
Hebrew University  
ADDRESS: Jerusalem, Israel  
TITLE: Conceptual Problems 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;  
CONSUMERS; 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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Reichman, S.; Stopher, P.R.  
Hebrew University; Cornell University  
ADDRESS: MN, Jerusalem, Israel; CU, Ithaca, NY  
TITLE: Applications of Value of Travel Time to  
Travel Demand Estimation

Paper published in Transportation Research Record  
587, 6-11

1976

SPONSOR: National Academy of Sciences,  
Transportation Research Board  
KEYWORDS: TRAVEL TIME; URBAN TRANSPORTATION;  
MODELS; VEHICLE TRIPS; COSTS; INTERCITY  
TRANSPORTATION

AVAILABILITY: National Academy of Sciences,  
Transportation Research Board, 2101  
Constitution Avenue, NW, Washington, DC 20418  
\$2.40 for Transportation Research Record 587

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Reilly, 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  
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Washington, DC, January 1977

1977, January

KEYWORDS: COSTS; PATES (COSTS); DEMAND  
(ECONOMICS); MASS TRANSPORTATION

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Reilly, J.J.; Wiswall, R.H.; Waide, 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, 88 p.  
1974, October

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

KEYWORDS: HYDROGEN; HYDROGEN STORAGE; HYDRIDES;  
AUTOMOBILES; MAGNESIUM HYDRIDES; ALUMINUM  
HYDRIDES; DESIGN; STABILITY; COMPARATIVE  
EVALUATIONS; TABLES (DATA); DIAGRAMS;  
ALTERNATE FUELS

AVAILABILITY: NTIS

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Reister, D.B.  
Institute for Energy Analysis  
ADDRESS: Oak Ridge, TN 37830  
TITLE: The Total Energy Cost of Freight Transport

Report No. ORAU/IEA(M)-77-7, v.p.  
1977, February

SPONSOR: Energy Research and Development  
Administration

KEYWORDS: COSTS; ENERGY CONSUMPTION; CARGO  
TRANSPORTATION; NET ENERGY; RAIL  
TRANSPORTATION; WATER TRANSPORTATION; TRUCKS;  
INTERCITY TRANSPORTATION; AIR TRANSPORTATION;  
INPUT-OUTPUT ANALYSIS; COMPARATIVE EVALUATIONS

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Renshaw, V.; Friedenber, M.L.; Levine, B.  
U.S. Dept. of Commerce, Bureau of Economic  
Analysis

ADDRESS: Washington, DC

TITLE: Work-Force Migration Patterns, 1970-76

Reprint from Survey of Current Business, February  
1978, 17-20

1978, 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

Report No. ORNL/TN-5568, 338 p.

1976, December

SPONSOR: Energy Research and Development  
Administration

KEYWORDS: ENERGY DEMAND; ENERGY SUPPLIES; ENERGY  
RESOURCES; TABLES (DATA); MAPS; NATURAL GAS;  
PETROLEUM; COAL; HYDROELECTRIC POWER; NUCLEAR  
POWER; PETROLEUM PRODUCTS; ALABAMA; ARKANSAS;  
FLORIDA; GEORGIA; KENTUCKY; LOUISIANA;  
MISSISSIPPI; NORTH CAROLINA; OKLAHOMA; SOUTH  
CAROLINA; TENNESSEE; TEXAS; VIRGINIA; WEST  
VIRGINIA; SOUTHERN STATES; REGIONAL ANALYSIS;  
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

Report No. ORNL/TN-6190, 254 p.

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.G.  
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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Riddell, P.R.; Oliver, R.C.; Reichenbach, R.E.  
Institute for Defense Analyses, Science and  
Technology Division  
ADDRESS: 400 Army-Navy Drive, Arlington, VA 22202  
TITLE: DoD Energy R & D. Part II: Military



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Fuel Options--Performance and R & D  
Implications

Report No. AD/A 042272, IDA Paper P-1116, 108 p.  
1977, March

SPONSOR: U.S. Dept. of Defense, Defense Advanced  
Research Projects Agency; U.S. Dept. of  
Defense, Office of the Director of Defense  
Research and Engineering

KEYWORDS: MILITARY; FUELS; CONSUMPTION; ENERGY  
MANAGEMENT; FORECASTING; PETROLEUM; SYNTHETIC  
FUELS; AVIATION FUELS; TABLES (DATA); OIL  
SHALE; HYDROCARBONS; ALTERNATE FUELS;  
RESEARCH; DEVELOPMENT; ENGINES; TRANSPORTATION  
AVAILABILITY: NTIS

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Rieber, M.; Soo, S.L.; King, P.; King, Y.T.;  
Leung, T.; Wu, H.; Wu, J.

Illinois, University of, Center for Advanced  
Computation

ADDRESS: Urbana, IL 61801

TITLE: Comparative Coal Transportation Costs: An  
Economic and Engineering Analysis of Truck,  
Belt, Rail, Barge and Coal Slurry and  
Pneumatic Pipelines. Volumes 1-8

CAC Document No. 223; Report Nos. PB-274379, 93  
p. for Volume 1; PB-274380, 114 p. for Volume  
2; PB-274381, 58 p. for Volume 3; PB-274382,  
96 p. for Volume 4; PB-274383, 384 p. for  
Volume 5; PB-274384, 65 p. for Volume 6;  
PB-274385, 78 p. for Volume 7; PB-274386, 15  
p. for Volume 8

1977, August

SPONSOR: U.S. Dept. of Interior, Bureau of Mines;  
Federal Energy Administration

KEYWORDS: COAL; TRANSPORTATION; COSTS; ECONOMICS;  
TRUCKS; RAIL TRANSPORTATION; SLURRIES;  
BARGES; PIPELINE TRANSPORTATION; PNEUMATIC  
TRANSPORT; CONVEYORS; COMPARATIVE  
EVALUATIONS; MODELS; CAPITAL COSTS; OPERATING  
COSTS; TABLES (DATA); GRAPHS (CHARTS);  
WATERWAY TRANSPORTATION; REGIONAL ANALYSIS;  
ENGINEERING; CARGO TRANSPORTATION  
AVAILABILITY: NTIS

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Rinde, J.A.; Chiao, T.T.; Stone, R.G.

Lawrence Livermore Laboratory

ADDRESS: University of California, Livermore, CA  
94550

TITLE: Composite Fiber Flywheel for Energy Storage

Paper published in 8th National SAMPE (Society  
for the Advancement of Materials and Process  
Engineering) Technical Conference. Volume  
8. Bicentennial of Materials, pp. 25-43;  
conference held October 12-14, 1976 in  
Seattle, Washington

1976, October

SPONSOR: Energy Research and Development  
Administration

KEYWORDS: FLYWHEELS; ENERGY STORAGE; COMPOSITE  
MATERIALS; FIBERS; DESIGN; DEVELOPMENT;  
UTILIZATION; HYBRID ELECTRIC-POWERED  
VEHICLES; LAWRENCE LIVERMORE LABORATORY;  
PHYSICAL PROPERTIES; RESEARCH PROGRAMS;  
TABLES (DATA); GRAPHS (CHARTS)

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Ring, S.L.; Brewer, 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

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Report presented at the 54th Annual Meeting of  
the Transportation Research Board, published  
in "Transportation Energy Conservation and  
Demand," Transportation Research Record 561,  
12-22

1976

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

KEYWORDS: RURAL AREAS; RURAL TRANSPORTATION; RAIL  
TRANSPORTATION; FOOD; TRANSPORTATION;  
SOCIO-ECONOMIC FACTORS; 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

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Rishavy, E.A.; Hamilton, S.C.; Ayers, J.A.;  
Keane, M.A.

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

Paper No. 770075, presented at the Society of  
Automotive Engineers' International  
Automotive Engineering Congress and  
Exposition, Cobo Hall, Detroit, Michigan,  
February 28-March 4, 1977, 20 p.

1977

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., 400 Commonwealth Drive, Warrendale, PA  
15096

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Roan, V.P.

Florida, University of, Dept. of Mechanical  
Engineering

ADDRESS: Gainesville, FL

TITLE: The Design and Development of a  
Hybrid-Electric Urban Transit Vehicle

Paper presented at the Fourth International  
Electric Vehicle Symposium (sponsored by the  
Electric Vehicle Council and the  
International Union of Producers and  
Distributors of Electrical Energy), held in  
Dusseldorf, Germany, August 31 - September 2,  
1976, 25 p.

1976, September

SPONSOR: Florida Dept. of Transportation

KEYWORDS: ELECTRIC VEHICLES; URBAN  
TRANSPORTATION; BUSES (VEHICLES); HYBRID  
ELECTRIC-POWERED VEHICLES; DESIGN;  
COMPUTERIZED SIMULATION; DRAG; DIESEL  
ENGINES; TESTING; ROAD TESTS; AERODYNAMICS;  
GRAPHS (CHARTS)

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

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Roberts, P.O.

Massachusetts Institute of Technology, Center for  
Transportation Studies

ADDRESS: Cambridge, MA 02139



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&lt;536&gt; COST.

TITLE: Factors Influencing the Demand for Goods Movement

CTS Report No. 75-16, Working Paper No. 1, 34 p.  
1975, September

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

KEYWORDS: CARGO TRANSPORTATION; MARKET; DISTRIBUTION; COSTS; CONSUMERS; DEMAND (ECONOMICS); PURCHASING; GRAPHS (CHARTS); INVESTORIES; 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

CTS Report No. 76-1, 26 p.

1976, January

SPONSOR: Federal Energy Administration

KEYWORDS: FORECASTING; CARGO TRANSPORTATION; MATHEMATICAL MODELS; COSTS; TARIFFS; COMMODITIES; DEMAND (ECONOMICS); PLANNING; RATES (COSTS)

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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. CTS 76-3, 18 p.

1976, February

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

KEYWORDS: CARGO TRANSPORTATION; SHIPMENTS; DATA ACQUISITION; COMMODITIES; SURVEYS; MODELS; DATA COMPILATION; COSTS; TABLES (DATA); INFORMATION; PLANNING; DEMAND (ECONOMICS); DISTANCE

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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

CTS Report No. 76-14, 174 p.

1976, November

SPONSOR: Federal Energy Administration, Office of Transportation Policy Research

KEYWORDS: INTERCITY TRANSPORTATION; CARGO TRANSPORTATION; COSTS; MODELS; FORECASTING; TRUCKS; RAIL TRANSPORTATION; TRAVEL TIME; DELAYS; TARIFFS; FUEL CONSUMPTION; WATERWAY TRANSPORTATION; SHIPMENTS; FUEL ECONOMY; TONNAGE; TABLES (DATA); COMMODITIES

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Robertson, B.; Baugarten, G.F.

U.S. Dept. of Commerce, National Bureau of

Standards, Institute of Basic Standards

ADDRESS: Washington, DC 20234

TITLE: Evaluation of Automotive Fuel Flowmeters

Report No. PB-268582, NBS TN 943, 99 p.

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 GPO, Stock No. 003-003-01799-0

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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

Report No. PB-250884, RMC-UR-286, 321 p.

1975, December

SPONSOR: Council on Environmental Quality; Federal Energy Administration

KEYWORDS: ENERGY CONSERVATION; PASSENGER TRANSPORTATION; INTERCITY TRANSPORTATION; MODELS; FORECASTING; SOCIO-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.

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TITLE: Intercity Passenger Transportation: Mode/Energy Conservation. Volume I: Executive Summary

Report No. PB-250883, RMC Report UR-286, 30 p.

1975, December

SPONSOR: Council on Environmental Quality; Federal Energy Administration

KEYWORDS: INTERCITY TRANSPORTATION; GOVERNMENT POLICIES; MODELS; FUEL ECONOMY; TAXES; ENERGY CONSUMPTION; ECONOMICS; STATISTICS; VEHICLE MILES TRAVELED; FORECASTING; TRANSPORTATION MODE CHOICE

AVAILABILITY: NTIS

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Rockwell International, Space Division

ADDRESS: Canoga Park, CA

TITLE: Economic and Technical Feasibility Study for Energy Storage Flywheels

Report No. ERDA 76-65, 436 p.

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 UTILITIES; COMMERCIAL SECTOR; INDUSTRIAL SECTOR; RESEARCH; DESIGN; RESIDENTIAL SECTOR; HYBRID ELECTRIC-POWERED VEHICLES; ELECTRIC VEHICLES; INSTITUTIONAL FACTORS; SAFETY; GRAPHS (CHARTS); DIAGRAMS

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Roelke, R.J.; McAllin, K.L.  
National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135  
TITLE: Cold-Air Performance of the  
Compressor-Drive Turbine of the Department of  
Energy Baseline Automobile Gas-Turbine Engine

Report No. DOE/NASA/1011-78/25, NASA TN-78894,  
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1978, July

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: GAS TURBINE ENGINES; PERFORMANCE; US  
DOE; AUTOMOBILES; AERODYNAMICS; VELOCITY;  
TESTING; ENGINES; EFFICIENCY; EQUIPMENT;  
MEASUREMENT; PRESSURE MEASUREMENT; GRAPHS  
(CHARTS); DIAGRAMS; TEMPERATURE; TORQUE  
AVAILABILITY: NTIS

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Rohy, D.A.; Wachman, J.P.; Duffy, T.E.  
International Harvester Co., Solar Division  
ADDRESS: 2200 Pacific Highway, San Diego, CA  
92138  
TITLE: Automotive Storage of Hydrogen Using  
Modified Magnesium Hydrides

Report No. TEC-75/002, 55 p.

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; HYDRIDES;  
REFUELING; TABLES (DATA); GRAPHS (CHARTS);  
HYDROGEN STORAGE  
AVAILABILITY: NTIS

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Rosenberg, N.; Bufferd, A.; Coonley, P.;  
Hamilton, W.; Kaiser, R.; Raber, P.T.  
U.S. Dept. of Transportation, Transportation  
Systems Center  
ADDRESS: Kendall Square, Cambridge, MA 02142  
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SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: HYBRID ELECTRIC-POWERED VEHICLES;  
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REGULATIONS; ELECTRIC VEHICLES; TRAFFIC  
CONTROL; GOVERNMENT POLICIES; AUTOMOTIVE  
INDUSTRY; ELECTRIC POWER; BATTERY CHARGING;  
VEHICLE PARKING; TABLES (DATA); REGIONAL  
ANALYSIS; PRICES; RATES (COSTS); PETROLEUM;  
URBAN AREAS  
AVAILABILITY: NTIS

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Romanqvist, J.K.G.; Gunnarsson, S.G.; Lundholm,  
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KB United Stirling (Sweden) AB & Co.  
ADDRESS: Sweden  
TITLE: The Development of a 150 kW (200 HP)  
Stirling Engine for Medium Duty Automotive  
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1977

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

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Rosenthal, S.R.; Herniter, J.D.; Welaw, U.P.  
Boston University, School of Management  
ADDRESS: Boston, MA 02215  
TITLE: Model for Cost-Effective Maintenance of  
Rail Transit Vehicles in Urban Mass Transit  
Systems

Paper published in Transportation Research Record  
627, 21-28

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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  
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Ross, J.A.; Wooldridge, G.A.  
Rohr Industries Inc., Advanced Transportation  
Systems  
ADDRESS: Chula Vista, CA 92010  
TITLE: Preliminary Power Train Design for a  
State-of-the-Art Electric Vehicle

Report No. DOE/NASA/0592-78/1, NASA CR-135340,  
RNR-78-035, 222 p.

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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: NTIS

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Rowlett, B.W.; Murry, R.  
Airessearch Manufacturing Co.  
ADDRESS: Torrance, CA  
TITLE: Near-Term Electric Vehicle Program: Phase  
1, Final Report

Report No. SAN/1213-1, 259 p.  
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: NTIS

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Rescetto, D.; McCormick, J.; Gray, S.  
Mechanical Technology Inc.  
ADDRESS: Latham, NY 12110  
TITLE: Hydrodynamic Air Lubricated Compliant  
Surface Bearing for an Automotive Gas Turbine  
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1978, April

SPONSOR: U.S. Dept. of Energy, Division of  
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KEYWORDS: TESTING; AUTOMOTIVE ENGINES; GAS  
TURBINE ENGINES; BEARINGS; DESIGN;  
PERFORMANCE; TEMPERATURE  
AVAILABILITY: NTIS

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Sacco, J.P.; Hajj, M.M.  
South Carolina, University of, Dept. of  
Government and International Studies; South  
Carolina, University of, Traffic and  
Transportation Center  
ADDRESS: Columbia, SC 29208  
TITLE: Impact of the Energy Shortage on Travel  
Patterns and Attitudes

Report presented at the 54th Annual Meeting of  
the Transportation Research Board, published  
in "Transportation Energy Conservation and  
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1976

SPONSOR: U.S. Dept. of Transportation, Urban Mass  
Transportation Administration  
KEYWORDS: ENERGY SHORTAGES; TRAVEL; ATTITUDES;  
AUTOMOBILES; SOUTH CAROLINA; PUBLIC  
TRANSPORTATION; GASOLINE; AVAILABILITY;  
SERVICES; ENERGY CONSERVATION; SURVEYS;  
VELOCITY; BEHAVIOR; PRICES; TABLES (DATA);  
BUSES (VEHICLES); CARPOOLING  
AVAILABILITY: National Academy of Sciences,  
Transportation Research Board, 2101  
Constitution Ave. NW, Washington, DC 20418  
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Samuel, J.M.G.  
Advanced Vehicle Systems Ltd.  
ADDRESS: United Kingdom  
TITLE: U.K. Electric Vehicle Development  
Programmes

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Automotive Engineers' Congress and  
Exposition, Cobo Hall, Detroit, Michigan,  
February 27 - March 3, 1978, 12 p.

1978

KEYWORDS: UNITED KINGDOM; ELECTRIC VEHICLES;  
BATTERIES; DESIGN; VANS; LEAD-ACID BATTERIES;  
RESEARCH; PHOTOGRAPHS  
AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096 \$2.50

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Sanders, D.B.; Reymen, T.A.; Bhatt, K.  
De Leuw, Cather and Co.; Urban Institute  
ADDRESS: Washington, DC  
TITLE: Characteristics of Urban Transportation  
Systems: A Handbook for Transportation  
Planners

V-P.

1978, May

SPONSOR: U.S. Dept. of Transportation, Urban Mass  
Transportation Administration; U.S. Dept. of

Transportation, Federal Highway Administration  
KEYWORDS: URBAN TRANSPORTATION; PLANNING; RAIL  
TRANSPORTATION; BUSES (VEHICLES); RAPID  
TRANSIT SYSTEMS; HIGHWAY TRANSPORTATION;  
VELOCITY; CAPACITY; OPERATING COSTS; ENERGY  
CONSUMPTION; EMISSIONS; ACCIDENTS; REGIONAL  
ANALYSIS; COMPARATIVE EVALUATIONS; GRAPHS  
(CHARTS); TABLES (DATA)

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Sasaki, B.R.  
Executive Office of the President, Office of  
Management and Budget  
ADDRESS: Washington, DC  
TITLE: Predicting Transporter's Choice of Mode

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the Transportation Research Record 577,  
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RIVER; TRAFFIC; STATISTICS; TRANSPORTATION  
MODE CHOICE

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Sasser, J.; Emerson, J.; Garcia, A.  
Tetra Tech Inc.  
ADDRESS: 1911 N. Fort Myer Drive, Arlington, VA  
22209  
TITLE: Assessment and Forecast of Marine Fuels  
Price and Availability

Report No. COM-75-1054, HA-RD-920-75021, v.p.  
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SPONSOR: U.S. Dept. of Commerce, Maritime  
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KEYWORDS: FORECASTING; WATER TRANSPORTATION;  
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TRANSPORTATION; RESIDUAL OILS; TANKER SHIPS;  
CARGO TRANSPORTATION; FUEL CONSUMPTION;  
ALTERNATE FUELS; PETROLEUM; DEMAND  
(ECONOMICS); SUPPLY (ECONOMICS); ENERGY  
DEMAND; ENERGY SUPPLIES  
AVAILABILITY: NTIS

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Schimpeler, C.C.; Corradino, J.C.; Jarvis, J.J.;  
Unger, V.R.; Stout, R.W.  
Schimpeler-Corradino Associates; Georgia  
Institute of Technology; U.S. Dept. of  
Transportation  
TITLE: Optimum Staging of Projects in a Highway  
Plan

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1976

KEYWORDS: HIGHWAYS; PLANNING; FORECASTING;  
TRAFFIC; MODELS; TABLES (DATA); SCHEDULING;  
CONSTRUCTION  
AVAILABILITY: National Academy of Sciences,  
Transportation Research Board, 2101  
Constitution Ave. NW, Washington, DC 20418  
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Schink, G.R.; Loxley, C.J.  
Wharton EPA Inc.  
ADDRESS: One University City, 4025 Chestnut St.,

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Philadelphia, PA 19104  
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1977, February

SPONSOR: U.S. Dept. of Transportation, Office of  
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 SALES; VEHICLE REGISTRATIONS; FUEL ECONOMY;  
 SIMULATION; GOVERNMENT POLICIES; COSTS; STOCKS  
 AVAILABILITY: NTIS

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Schink, G.R.; Loxley, C.J.

Wharton EPA Inc.

ADDRESS: One University City, 4025 Chestnut  
 Street, Philadelphia, PA 19104

TITLE: An Analysis of the Automobile Market:  
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 Demand for Automobiles. Volume II:  
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Volume II of 3 volumes, v.p.

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SPONSOR: U.S. Dept. of Transportation, Office of  
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 (ECONOMICS); SIMULATION; ECONOMETRIC MODELS;  
 FORECASTING; GASOLINE; PRICES; TABLES (DATA);  
 INCOME; TAXES; GOVERNMENT POLICIES; OPPC  
 AVAILABILITY: NTIS

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Schink, G.R.; Loxley, C.J.

Wharton EPA Inc.

ADDRESS: One University City, 4025 Chestnut  
 Street, Philadelphia, PA 19104

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 Modeling the Long-Run Determinants of the  
 Demand for Automobiles. Volume III:  
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Volume III of 3 volumes, 261 p.

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Schmitt, F.W.; Wagner, C.E.

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ADDRESS: Detroit, MI

TITLE: Baseline Gas Turbine Development Program.  
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SPONSOR: Energy Research and Development  
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 KEYWORDS: GAS TURBINE ENGINES; DESIGN;  
 EFFICIENCY; FUEL ECONOMY; GRAPHS (CHARTS);  
 TABLES (DATA); DIAGRAMS; VEHICLES;  
 PERFORMANCE; DEVELOPMENT  
 AVAILABILITY: NTIS

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Schwartz, H.J.

National Aeronautics and Space Administration,  
 Lewis Research Center

ADDRESS: Cleveland, OH

TITLE: The Computer Simulation of Automobile Use  
 Patterns for Defining Battery Requirements  
 for Electric Cars

Paper presented at the Fourth International  
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KEYWORDS: ELECTRIC VEHICLES; BEHAVIOR;  
 COMPUTERIZED SIMULATION; TRAVEL; AUTOMOBILES;  
 BATTERIES; UTILIZATION  
 AVAILABILITY: Electric Vehicle Council, 90 Park  
 Ave., New York, NY 10016 \$1.50

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Schwartz, H.J.

National Aeronautics and Space Administration,  
 Lewis Research Center

ADDRESS: Cleveland, OH 44135

TITLE: New Batteries and Their Impact on Electric  
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SPONSOR: Energy Research and Development  
 Administration, Division of Transportation  
 Energy Conservation  
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 COMPARATIVE EVALUATIONS

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Schwartz, H.J.

National Aeronautics and Space Administration,  
 Lewis Research Center

ADDRESS: Cleveland, OH 44135

TITLE: The Requirements for Batteries for  
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 June 21-24, 1976, 7 p.

1976, June 24

KEYWORDS: BATTERIES; ELECTRIC VEHICLES; MARKET;  
 PETROLEUM; FUEL CONSUMPTION; COMMERCIALIZATION  
 AVAILABILITY: NTIS

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Schwartz, H.L.

Miami University

ADDRESS: Miami, OH

TITLE: Marketing Approach Using Product Diffusion  
 Knowledge to Measure Consumer Transit  
 Attitudes (Abridgment)

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 625, 4-6

1977

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 Transportation Research Board  
 KEYWORDS: PUBLIC TRANSPORTATION; MARKETING;

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 QUESTIONNAIRES  
 AVAILABILITY: National Academy of Sciences,  
 Transportation Research Board, 2101  
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 \$3.20 for Transportation Research Record 625

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 Schwarz, R.  
 ASL Engineering Inc.  
 ADDRESS: 895 South Fairview Avenue, Goleta, CA  
 93017  
 TITLE: Near-Term Electric Vehicle Program.  
 Phase 1, Final Report

Report No. SAN/1295-1, 304 p.  
 1977, August  
 SPONSOR: Energy Research and Development  
 Administration, Division of Transportation  
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 KEYWORDS: ELECTRIC VEHICLES; DESIGN; BATTERIES;  
 PERFORMANCE; TABLES (DATA); GRAPHS (CHARTS);  
 DIAGRAMS; LIFE-CYCLE COST; COSTS; EFFICIENCY;  
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 CONSUMPTION; ENERGY CONSERVATION; WEIGHT  
 AVAILABILITY: NTIS

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 Seda, B.  
 Research Institute for Rotating Electrical  
 Machines  
 ADDRESS: Brno, Czechoslovakia  
 TITLE: Development of Electric Vehicles in  
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 SPONSOR: Electric Vehicle Council; International  
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 KEYWORDS: ELECTRIC VEHICLES; DEVELOPMENT;  
 CZECHOSLOVAKIA; BUSES (VEHICLES); CONTROL  
 AVAILABILITY: Electric Vehicle Council, 90 Park  
 Ave., New York, NY 10016 \$1.50

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 Sevan, W.A.; Salzano, F.J.  
 Brookhaven National Laboratory  
 ADDRESS: Upton, NY  
 TITLE: Systems Study of Two Synthetic  
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 Oct. 17, 1974, 10 p.  
 1974  
 SPONSOR: Energy Research and Development  
 Administration  
 KEYWORDS: ALTERNATE FUELS; COAL; HYDROGEN;  
 METHANE; SYNTHETIC FUELS; FORECASTING;  
 MODELS; ENVIRONMENTAL IMPACT; TRANSPORTATION  
 AVAILABILITY: NTIS

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 Shaugnessy, A.E.  
 National Academy of Sciences, National Research  
 Council, Transportation Research Board  
 ADDRESS: 2101 Constitution Avenue, Washington, DC  
 20418

TITLE: Railroad Electrification: The Issues  
 Transportation Research Board Special Report 180,  
 88 p.  
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 KEYWORDS: RAIL TRANSPORTATION; RAILROADS;  
 ELECTRIC RAIL SYSTEMS; CONFERENCES;  
 EQUIPMENT; COSTS; ELECTRIC POWER DEMAND;  
 FINANCING; PLANNING; CAPITAL COSTS;  
 MAINTENANCE; ECONOMIC ANALYSIS  
 AVAILABILITY: \$3.80

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 Logistics Management Institute  
 ADDRESS: Washington, DC  
 TITLE: Volumes and Transportation Costs of Fossil  
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 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; COAL; TRANSPORTATION;  
 NATURAL GAS; REGIONAL ANALYSIS; ENERGY  
 CONSUMPTION; MODELS; ENERGY SYSTEMS;  
 SIMULATION; ENERGY SUPPLIES; GRAPHS (CHARTS);  
 SUPPLY (ECONOMICS)  
 AVAILABILITY: NTIS

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 Shelton, E.H.  
 Energy Research and Development Administration,  
 Bartlesville Energy Research Center  
 ADDRESS: Bartlesville, OK  
 TITLE: Motor Gasolines, Winter 1976-77

Report No. BERC/PPS-77/3, 89 p.  
 1977, June  
 KEYWORDS: GASOLINE; SURVEYS; TABLES (DATA);  
 GRAPHS (CHARTS); DISTILLATION; UNLEADED  
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 TRENDS; PHYSICAL PROPERTIES  
 AVAILABILITY: NTIS

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 Shelton, E.H.  
 U.S. Dept. of Energy, Bartlesville Energy  
 Research Center  
 ADDRESS: Bartlesville, OK  
 TITLE: Diesel Fuel Oils, 1977

Report No. BERC/PPS-77/5, 38 p.  
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 KEYWORDS: DIESEL FUELS; FUEL OIL; TABLES (DATA);  
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 CHEMICAL PROPERTIES; CHEMICAL COMPOSITION;  
 TESTING  
 AVAILABILITY: NTIS

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 Research Center  
 ADDRESS: Bartlesville, OK  
 TITLE: Motor Gasolines, Summer 1977

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TRENDS; PHYSICAL PROPERTIES  
AVAILABILITY: NTIS

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U.S. Dept. of Energy, Bartlesville Energy  
Research Center  
ADDRESS: Bartlesville, OK  
TITLE: Aviation Turbine Fuels, 1977

Report No. BERC/PPS-78/2, 13 p.  
1978, May

KEYWORDS: AVIATION FUELS; JET ENGINE FUELS;  
COMPARATIVE EVALUATIONS; STATISTICS; CHEMICAL  
PROPERTIES  
AVAILABILITY: NTIS

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Sherrer, W.W.  
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Office of Highway Planning  
ADDRESS: Washington, DC  
TITLE: Road User and Property Taxes on Selected  
Motor Vehicles: 1973

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KEYWORDS: ROADS; PROPERTY VALUES; TAXES;  
VEHICLES; HIGHWAYS; MOTORCYCLES; AUTOMOBILES;  
MTSFS (VEHICLES); TRUCKS; TABLES (DATA);  
GRAPHS (CHARTS); STATE GOVERNMENT; MAPS  
AVAILABILITY: GPO \$0.90, Stock No. 5002-00098

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Shonka, D.B.  
Oak Ridge National Laboratory, Energy Division,  
Regional and Urban Studies Section  
ADDRESS: Oak Ridge, TN 37830  
TITLE: Characteristics of Automotive Fleets in  
the United States: 1966-1977

Report No. ORNL/TN-6449 Special, 49 p.  
1978, September

SPONSOR: U.S. Dept. of Energy, Division of  
Transportation Energy Conservation  
KEYWORDS: AUTOMOTIVE FLEETS; AUTOMOBILES;  
INVENTORIES; PURCHASING; FUEL ECONOMY;  
OWNERSHIP; SURVEYS; TABLES (DATA); SIZE;  
VEHICLE REGISTRATIONS; VEHICLE MILES  
TRAVELED; CHARACTERISTICS  
AVAILABILITY: NTIS

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Shonka, D.B.; Loebl, A.S.; Patterson, P.D.;  
O'Connor, T.P.; Ogle, W.C.; Rose, A.B.;  
Greene, 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

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1977, October

SPONSOR: Energy Research and Development  
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TRANSPORTATION; MARINE TRANSPORTATION;  
PIPELINE TRANSPORTATION; STATISTICS; TABLES

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(DATA); GRAPHS (CHARTS); VEHICLES;  
REGULATIONS; ENERGY CONSUMPTION; DEMAND  
(ECONOMICS); FUEL ECONOMY; FUEL CONSUMPTION;  
AUTOMOBILES; ENERGY INTENSITY; TRAVEL; ENERGY  
DEMAND; PASSENGER TRANSPORTATION; AUTOMOTIVE  
FLEETS; PETROLEUM; SALES; PUBLIC  
TRANSPORTATION; URBAN TRANSPORTATION; VEHICLE  
REGISTRATIONS; VEHICLE MILES TRAVELED;  
FORECASTING; GOVERNMENT POLICIES; ENERGY  
SUPPLIES; WATER TRANSPORTATION  
AVAILABILITY: NTIS

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Silberman, 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

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TRIPS; PRICES; PLANNING; MODELS; PASSENGER  
TRANSPORTATION; COSTS; INTERCITY  
TRANSPORTATION; BEHAVIOR; USERS; ECONOMIC  
ANALYSIS; BENEFIT COST ANALYSIS; COST  
EFFECTIVENESS; TRAFFIC; RESEARCH; MOBILITY  
AVAILABILITY: \$2.40

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National Academy of Sciences, National Research  
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ADDRESS: 2101 Constitution Ave. NW, Washington,  
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TITLE: Transportation Energy Conservation and  
Demand

Transportation Research Record 561, 6 reports  
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KEYWORDS: TRANSPORTATION; ENERGY CONSERVATION;  
ENERGY DEMAND; DEMAND (ECONOMICS);  
CONFERENCES; MEETINGS; URBAN TRANSPORTATION;  
ATTITUDES; ENERGY SHORTAGES; RURAL AREAS;  
COMMUTING; NEW JERSEY; GASOLINE; OWNERSHIP;  
ENVIRONMENTAL IMPACT; TABLES (DATA)  
AVAILABILITY: \$5.00

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Silence, S.M.; Chesshire, L.M.  
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ADDRESS: Washington, DC  
TITLE: Reevaluation of Ground Access to Airports

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Research Record No. 439, 19-27

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Research Council, Highway Research Board  
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TRAVEL TIME; PEAK-HOUR DEMAND; VELOCITY;  
URBAN TRANSPORTATION; URBAN AREAS; DISTANCE;  
GRAPHS (CHARTS)

AVAILABILITY: National Academy of Sciences,  
Transportation Research Board, 2101  
Constitution Ave. NW, Washington, DC 20418  
\$2.00 for Highway Research Record No. 439



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 ADDRESS: S&C, 1346 Chestnut Street, Philadelphia, PA 19107; B-A, 4733 Bethesda Ave., Bethesda, MD 20014  
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 AVAILABILITY: NTIS

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Skinner, L.E.  
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 TITLE: Comparative Costs of Urban Transportation Systems

Final Report, 100 p. 1978, June  
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 AVAILABILITY: GPO, Stock No. 050-001-00137-3

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Smith, J.R.; Tracy, J.C.; Potter, D.S.  
 General Motors Corp., Research Laboratories, Physics Dept., Environmental Activities Staff  
 ADDRESS: Warren, MI  
 TITLE: Tire Rolling Resistance - A Speed Dependent Contribution

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 ADDRESS: Cambridge, MA  
 TITLE: Strategy For Implementing Integrated Regional Transit

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 SPONSOR: U.S. Dept. of Transportation, Research and Development Policy Analysis Division  
 KEYWORDS: URBAN TRANSPORTATION; PUBLIC TRANSPORTATION; PLANNING; OPERATING COSTS; MOBILITY; PUBLIC OPINION  
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 ADDRESS: 400 Commonwealth Dr., Warrendale, PA 15096  
 TITLE: Automotive Fuel Economy (Selected SAE Papers 1965 - 1975)

Progress in Technology Series, Volume 15, 314 p. 1976  
 KEYWORDS: AUTOMOBILES; FUEL ECONOMY; TESTING; FUEL CONSUMPTION; UTILIZATION; OPERATION; DESIGN; LUBRICANTS; GASOLINE; BIBLIOGRAPHIES

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 TITLE: Engineering Know-How in Engine Design. Part 24: Economy in Engine Performance

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 KEYWORDS: AUTOMOTIVE ENGINES; AUTOMOTIVE ENGINEERING; FUEL CONSUMPTION; FUEL ECONOMY; DESIGN; AUTOMOTIVE EMISSIONS; FARM EQUIPMENT; DIESEL ENGINES; GRAPHS (CHARTS); DIAGRAMS; SYNTHETIC FUELS; AUTOMOTIVE EMISSION CONTROL; DYNAMOMETERS; TABLES (DATA); TRACTORS; LUBRICATING OILS

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Sokolsky, S.  
 Aerospace Corp., Energy and Resources Division  
 ADDRESS: 2350 E. El Segundo Blvd., El Segundo, CA 90245  
 TITLE: Alternative Policies for Effecting Intercity Energy Use

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Soltis, R.F.  
 National Aeronautics and Space Administration, Lewis Research Center  
 ADDRESS: Cleveland, OH 44135  
 TITLE: A Cycle Timer for Testing Electric Vehicles

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ADDRESS: Cleveland, OH 44135  
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ACCELERATION; ELECTRIC VEHICLE RANGE;  
PASSENGER TRANSPORTATION; FUEL ECONOMY; SPARK  
IGNITION ENGINES; PERFORMANCE; DIAGRAMS;  
GRAPHS (CHARTS); ENERGY CONSUMPTION  
AVAILABILITY: NTIS

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National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135  
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Report No. NASA TM X-73609, 27 p.  
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SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
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SYSTEMS; BATTERIES; PASSENGER TRANSPORTATION;  
DRIVING CYCLE; PERFORMANCE; MILEAGE; ENERGY  
CONSUMPTION; STANDARDS; PHOTOGRAPHS; GRAPHS  
(CHARTS); ELECTRIC VEHICLE RANGE  
AVAILABILITY: NTIS

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U.S. Dept. of Energy, Energy Information  
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ADDRESS: Washington, DC 20241  
TITLE: International Petroleum Annual: 1976

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KEYWORDS: PETROLEUM; PETROLEUM PRODUCTS;  
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TRANSPORTATION; ENERGY FLOW; TABLES (DATA);  
FORECASTING; ENERGY DEMAND; SYNTHETIC  
PETROLEUM; REFINING; PROPERTIES; OIL SHALE;  
ALCOHOL FUELS; AUTOMOBILES; METHANOL; COAL;  
PRODUCTION; HYDROCARBONS; INTERNAL COMBUSTION  
ENGINES; OCTANE; GASOLINE

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ADDRESS: 290 Interstate North, Suite 116,  
Atlanta, GA 30339  
TITLE: Evaluation of Maritime Industry Energy  
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AVAILABILITY: NTIS

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Sparks, W.D.  
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OPINION; INCENTIVES; INSULATION; APPLIANCES

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Spenny, C.H.; Clarke, J.M.  
U.S. Dept. of Transportation, Transportation  
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ADDRESS: Kendall Square, Cambridge, MA 02142  
TITLE: A Computer Program (POWREQ) for Power  
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AVAILABILITY: NTIS

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Springer, K.J.  
Southwest Research Institute, Automotive Research  
Division, Dept. of Emissions Research  
ADDRESS: San Antonio, TX  
TITLE: Transportation, Trucks and Fuel  
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AVAILABILITY: NTIS

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TITLE: An Analysis of Transportation Planning Effectiveness

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Pennsylvania State University, Pennsylvania Transportation Institute  
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AVAILABILITY: NTIS

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Cornell University, Dept. of Environmental Engineering  
ADDRESS: Ithaca, NY  
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KEYWORDS: TRAVEL TIME; ECONOMIC ANALYSIS; BENEFIT COST ANALYSIS; COST EFFECTIVENESS; PLANNING  
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(DATA); REGIONAL ANALYSIS; GOVERNMENT  
POLICIES; NORTHEASTERN STATES; ENERGY DEMAND  
AVAILABILITY: NTIS

<606>  
Sato, P.L.; Kilpatrick, H.E., Jr.  
Purvis Systems Inc., Washington Operations  
ADDRESS: 3286 M Street NW, Washington, DC 20007  
TITLE: Statistical Report on Urban Energy  
Consumption

Report No. OST-TPI-76-02, 72 p.  
1976, June  
SPONSOR: U.S. Dept. of Transportation, Office of  
the Secretary, Office of Transportation  
Economic Analysis  
KEYWORDS: CARGO TRANSPORTATION; ENERGY  
CONSUMPTION; GOVERNMENT POLICIES; URBAN  
AREAS; ENERGY RESOURCES; PRICES; PETROLEUM;  
US DOT; STATISTICS; TABLES (DATA); COAL;  
NATURAL GAS; ELECTRIC POWER; RESIDENTIAL  
SECTOR; INDUSTRIAL SECTOR; TRANSPORTATION  
AVAILABILITY: NTIS

<610>  
Tacina, R.  
National Aeronautics and Space Administration,  
Lewis Research Center  
ADDRESS: Cleveland, OH 44135  
TITLE: Experimental Evaluation of  
Premixing-Prevaporizing Fuel Injection  
Concepts for a Gas Turbine Catalytic Combustor

Report No. CONS/1011-18, NASA TM-73755, paper  
presented at the Winter Annual Meeting,  
American Society of Mechanical Engineers,  
Atlanta, Georgia, November 27 - December 2,  
1977, v.p.  
1977, August  
SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: FUEL INJECTION SYSTEMS; ATOMIZATION;  
EVAPORATION; DIAGRAMS; GRAPHS (CHARTS); GAS  
TURBINES; CATALYSTS; COMBUSTORS; AUTOMOBILES  
AVAILABILITY: NTIS

<607>  
Sweeney, J.L.  
Stanford University, Dept. of  
Engineering-Economic Systems  
ADDRESS: Stanford, CA 94305  
TITLE: U.S. Gasoline Demand: An Economic  
Analysis of the EPA New Car Efficiency  
Standard

51 p.  
1977, July  
SPONSOR: Energy Research and Development  
Administration, Office of Conservation  
Planning Policy  
KEYWORDS: GASOLINE; FUEL ECONOMY; AUTOMOBILES;  
EFFICIENCY; STANDARDS; FUEL CONSUMPTION;  
AUTOMOTIVE INDUSTRY; PRICES; GOVERNMENT  
POLICIES; ECONOMIC ANALYSIS; ELASTICITY  
(ECONOMICS); GRAPHS (CHARTS); TAXES; CONSUMERS

<611>  
Tap, R.; Kaprelian, A.  
U.S. Dept. of Transportation, Transportation  
Systems Center  
ADDRESS: Kendall Square, Cambridge, MA 02142  
TITLE: Transportation Statistical Data and  
Information

Report No. PB-265457, DOT-TSC-OST-76-60, 226 p.  
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 Systems  
Analysis and Information  
KEYWORDS: TRANSPORTATION; STATISTICS; GOVERNMENT  
POLICIES; INFORMATION; AVAILABILITY  
AVAILABILITY: NTIS

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

Data Resources Inc. Energy Bulletin, 6-11  
1977, August  
KEYWORDS: GASOLINE; TAXES; FUEL CONSUMPTION;

<612>  
Tausig, W.H.  
Tausig Associates  
ADDRESS: Canaan Street Village, Canaan, NH 03741  
TITLE: British Airways - An Analysis of  
Efficiency and Cost Levels

Report No. PB-268060, OST-PS-70292, 66 p.

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1977, May

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

EVALUATIONS; PASSENGER TRANSPORTATION;

OPERATING COSTS; CAPITAL COSTS; CARGO

TRANSPORTATION; USA; PRODUCTION; FINANCIAL

DATA; EARNINGS; PROFITS

AVAILABILITY: NTIS

&lt;613&gt;

Teal, R.; Wood, E., Jr.; Loudon, W.

Tufts University, Program in Urban, Social, and Environmental Policy

ADDRESS: Medford, MA 02155

TITLE: Tourist Traffic in Small Historic Cities: Analysis, Strategies, and Recommendations

Report No. PB-269492, DOT-TST-77-2, v.p.

1976, September

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

KEYWORDS: TOURISM; TRAFFIC; URBAN AREAS; URBAN

TRANSPORTATION; HISTORY; LOCAL GOVERNMENT;

TRAVEL; VEHICLE TRIPS; RECREATION; ECONOMIC

IMPACT; ENVIRONMENTAL IMPACT; SOCIAL IMPACT;

INSTITUTIONAL FACTORS; SALEM (MASSACHUSETTS);

ALEXANDRIA (VIRGINIA); ANNAPOLIS (MARYLAND);

NEWPORT (RHODE ISLAND); PLYMOUTH

(MASSACHUSETTS); MAPS

AVAILABILITY: NTIS

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Technology 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; SPACE HEATING; TECHNOLOGY; ENERGY

DEMAND; ENERGY CONVERSION; COST ANALYSIS;

SUPPLY (ECONOMICS); GRAPHS (CHARTS); IMPORTS;

TABLES (DATA); SYNTHETIC FUELS; PRICES; RATES

(COSTS); COMMERCIAL SECTOR; ELECTRIC POWER;

UTILIZATION; TRANSPORTATION

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Tew, W.; Jefferies, K.; Miao, D.

National Aeronautics and Space Administration, Lewis Research Center

ADDRESS: Cleveland, OH 44135

TITLE: A Stirling Engine Computer Model for Performance

Report No. DOE/NASA/1011-78/24, NASA-TN-78884, 69 p.

1978, July

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

KEYWORDS: STIRLING ENGINES; MODELS; PERFORMANCE;

THERMODYNAMIC PROPERTIES; SIMULATION;

COMPUTER PROGRAMS

AVAILABILITY: GPO, Stock No. 757-139/1201

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Thermo Electron Corp.

ADDRESS: 101 First Avenue, Waltham, MA 02154

TITLE: Feasibility Test on Compounding the Internal Combustion Engine for Automotive Vehicles, Task II. Final Report

Report No. COO-2690-1, TES193-76-75, 250 p.

1976

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

KEYWORDS: INTERNAL COMBUSTION ENGINES; DIESEL

ENGINES; RANKINE CYCLE ENGINES; PERFORMANCE;

FUEL ECONOMY; TRUCKS; DESIGN; GRAPHS

(CHARTS); DIAGRAMS; AUTOMOTIVE EMISSIONS;

FEASIBILITY; TESTING; WASTE HEAT; RECOVERY;

UTILIZATION; DEMONSTRATION

AVAILABILITY: NTIS

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Thompson, D.L.; Barth, J.; Garthner, R.; Soura, S. State University of New York, Center for Social Analysis

ADDRESS: Binghamton, NY 13901

TITLE: Analysis of State and Local Taxation of American Railroads

Report No. PB-268151, 138 p.

1977, January

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: NTIS

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Thuillier, R.H.; Dabberdt, W.F.;

Duffey-Armstrong, R.; Sandys, R.C.

Stanford Research Institute

ADDRESS: Menlo Park, CA 94025

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

Final Report, 137 p.

1977, April 4

SPONSOR: U.S. 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

CONSUMPTION; COMMUTERS; COSTS; HIGHWAYS;

MODELS; STATISTICS; INPUT-OUTPUT ANALYSIS;

COMMUTING

&lt;619&gt;

Towle, W.L.; Grase, J.E.A.; Chilenskas, A.A.; Ivins, P.O.

Argonne National Laboratory

ADDRESS: 9700 South Cass Ave., Argonne, IL 60439

TITLE: Cost Estimate for the Commercial Manufacture of Lithium/Iron Sulfide Cells for Load-Leveling

Report No. ANL-76-12, 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: NTIS

&lt;620&gt;

Trinc Transportation Consultants  
 ADDRESS: Suite #200, 475 L'enfant Plaza SW,  
 Washington, DC 20024  
 TITLE: Trinc's Blue Book of the Trucking  
 Industry: 1977 Edition

Thirty-Third Yearbook, annual publication, 286 p.  
 1977

KEYWORDS: TRUCKS; INDUSTRIAL SECTOR; FINANCIAL  
 DATA; STATISTICS; TABLES (DATA); MANPOWER;  
 INTERCITY TRANSPORTATION; EQUIPMENT; BALANCE  
 SHEETS; EXPENSES; REVENUE; REGIONAL ANALYSIS;  
 INCOME

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Truck Trailer Manufacturers Association  
 ADDRESS: 2430 Pennsylvania Ave. NW, Washington,  
 DC 20037  
 TITLE: 1977-78 Truck Trailer Manufacturers  
 Association Directory

Annual publication, v.p.  
 1978

KEYWORDS: DIRECTORIES; MANUFACTURERS; TRUCKS;  
 TRAILERS; CONTAINERS

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TRW Inc., Energy Systems Planning Division  
 ADDRESS: McLean, VA 22101  
 TITLE: Allocation of Natural Gas Under Energy  
 Emergencies: Analysis of Selected Federal  
 Actions

Doc. No. 97461-E001-RU-00, v.p.  
 1978, September

SPONSOR: Oak Ridge National Laboratory  
 KEYWORDS: GOVERNMENT POLICIES; ALLOCATIONS;  
 NATURAL GAS; RATIONING; ENERGY EMERGENCY  
 PLANNING; PIPELINES; ENERGY FLOW; PRODUCTION;  
 STATE ANALYSIS; COSTS; FORECASTING; PRICES;  
 FUEL SUBSTITUTION; TRANSPORTATION; PROPANE;  
 MINNESOTA; OHIO; TABLES (DATA)

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Turner, D.D.  
 Business Science Corp.  
 ADDRESS: Frederick, MD  
 TITLE: Management by Objectives Program of the  
 Florida Department of Transportation

Report presented at the 54th Annual Meeting of  
 the Transportation Research Board, published  
 in Transportation Research Record 585, 60-67  
 1976

KEYWORDS: MANAGEMENT; FLORIDA; TRANSPORTATION;  
 SCHEDULING; STATE GOVERNMENT; PLANNING;  
 DECISION MAKING

AVAILABILITY: National Academy of Sciences,  
 Transportation Research Board, 2101  
 Constitution Ave. NW, Washington, DC 20548  
 \$1.60 for Transportation Research Record

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Turner, F.C.; Davis, H.E.  
 International Road Federation  
 ADDRESS: 1023 Washington Building, Washington, DC  
 20005

TITLE: A Comparative Analysis of Urban  
 Transportation Requirements, Volumes I and II

Report No. PB-267788, FHWA-PL-77013, 52 p. for  
 Volume I; Report No. PB-267789,  
 FHWA-PL-77014, 432 p. for Volume II

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1977, February 25

SPONSOR: U.S. Dept. of Transportation, Federal  
 Highway Administration  
 KEYWORDS: COMPARATIVE EVALUATIONS; URBAN  
 TRANSPORTATION; TABLES (DATA); REGIONAL  
 ANALYSIS; SOCIO-ECONOMIC FACTORS; RAIL  
 TRANSPORTATION; POPULATION (STATISTICS);  
 COSTS; VEHICLE REGISTRATIONS; BUSES  
 (VEHICLES); TRUCKS; AUTOMOBILES; MASS  
 TRANSPORTATION; BRUSSELS; CANADA; PARIS;  
 MUNICH (GERMAN FEDERAL REPUBLIC); UNITED  
 KINGDOM; ITALY; JAPAN; MEXICO CITY; OSLO;  
 SPAIN; STOCKHOLM; SWITZERLAND; ATLANTA;  
 CHICAGO; DENVER; LOS ANGELES; NEW YORK CITY;  
 PHILADELPHIA; SAN FRANCISCO; SEATTLE;  
 WASHINGTON DC; REPUBLIC OF KOREA  
 AVAILABILITY: NTIS

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U.S. Congress  
 ADDRESS: Washington, DC  
 TITLE: National Traffic and Motor Vehicle Safety  
 Act of 1966

Public Law 89-563, 89th Congress, S. 3005, 13 p.  
 1966, September 9

KEYWORDS: SAFETY; GOVERNMENT POLICIES;  
 REGULATIONS; STANDARDS; MOTOR VEHICLES;  
 ACCIDENTS; MANUFACTURERS

AVAILABILITY: House and Senate Document Room,  
 Capitol Building, Washington, DC

&lt;626&gt;

U.S. Congress  
 ADDRESS: Washington, DC  
 TITLE: Railroad Revitalization and Regulatory  
 Reform Act of 1976

Public Law 94-210, 94th Congress, S. 2718, 119 p.  
 1976, February 5

KEYWORDS: RAIL TRANSPORTATION; RAILROADS;  
 INTERSTATE COMMERCE COMMISSION; REVENUE;  
 GOVERNMENT POLICIES; RATPS (COSTS);  
 FINANCING; REGULATIONS

AVAILABILITY: House and Senate Document Room,  
 Capitol Building, Washington, DC

&lt;627&gt;

U.S. Congress  
 ADDRESS: Washington, DC  
 TITLE: Motor Vehicle Information and Cost Savings  
 Act

Public Law 92-513, 92nd Congress, S. 976, 17 p.  
 1972, October 20

KEYWORDS: PASSENGER TRANSPORTATION; STANDARDS;  
 MOTOR VEHICLES; AUTOMOBILES; GOVERNMENT  
 POLICIES; REGULATIONS; SAFETY; EQUIPMENT;  
 ACCIDENTS; LEGAL ASPECTS; INSURANCE;  
 ODOMETERS; BUMPERS

AVAILABILITY: House and Senate Document Room,  
 Capitol Building, Washington, DC

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U.S. Congress  
 ADDRESS: Washington, DC  
 TITLE: Noise Control Act of 1972

Public Law 92-574, 92nd Congress, H.R. 11021  
 1972, October 27

KEYWORDS: NOISE POLLUTION; GOVERNMENT POLICIES;  
 REGULATIONS; STANDARDS; COMMERCIAL SECTOR;  
 EQUIPMENT; AIRCRAFT; LEGAL ASPECTS;  
 RAILROADS; MOTOR VEHICLES; INTERSTATE

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&lt;628&gt; CONT.

TRANSPORTATION; TRANSPORTATION  
 AVAILABILITY: House and Senate Document Room,  
 Capitol Building, Washington, DC

&lt;629&gt;

U.S. Congress

ADDRESS: Washington, DC

TITLE: Federal-aid Highway Act of 1976 and  
 Highway Safety Act of 1976

Public Law 94-280, 94th Congress, H.R. 8235, 33 p.  
 1976, May 5

KEYWORDS: INTERSTATE TRANSPORTATION; HIGHWAYS;  
 HIGHWAY TRANSPORTATION; CONSTRUCTION;  
 GOVERNMENT POLICIES; APPROPRIATIONS; TRAFFIC  
 CONTROL; SAFETY; RAIL TRANSPORTATION; BUSES  
 (VEHICLES)

AVAILABILITY: House and Senate Document Room,  
 Capitol Building, Washington, DC

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U.S. Congress, Joint Committee on Taxation

ADDRESS: Washington, DC

TITLE: Energy Program 8: Energy Tax Proposals  
 Relating to Transportation

Congressional Committee Print, 47 p.

1977, June 6

SPONSOR: U.S. House of Representatives, Committee  
 on Ways and Means

KEYWORDS: TRANSPORTATION; LEGISLATION; TAXES;  
 AUTOMOBILES; ECONOMICS; GASOLINE; FUEL  
 CONSUMPTION; INDUSTRIES; REVENUE; ENERGY  
 POLICY; ENERGY CONSERVATION; TABLES (DATA);  
 INCOME; FUEL ECONOMY

&lt;631&gt;

U.S. Congress, Office of Technology Assessment

ADDRESS: Washington, DC 20510

TITLE: Analysis of the Proposed National Energy  
 Plan

Report No. OTA-E-51, 248 p.

1977, August

SPONSOR: U.S. House of Representatives, Committee  
 on Science and Technology; U.S. House of  
 Representatives, Committee on Interior and  
 Insular Affairs

KEYWORDS: ENERGY POLICY; PLANNING; LEGISLATION;  
 SOCIO-ECONOMIC FACTORS; ENERGY SUPPLIES;  
 ENERGY DEMAND; SOCIAL IMPACT; PRICES; FOSSIL  
 FUELS; COAL; PETROLEUM; NATURAL GAS; NUCLEAR  
 ENERGY; ENERGY CONSERVATION; TABLES (DATA);  
 NATIONAL ENERGY PLAN

AVAILABILITY: GPO \$4.00, Stock No.

052-003-00420-8

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U.S. Congress, Office of Technology Assessment

ADDRESS: Washington, DC 20510

TITLE: Assessment of Community Planning for Mass  
 Transit. Volume I: Summary

Report No. PB-253679, OTA-T-16, 82 p.

1976, February

KEYWORDS: MASS TRANSPORTATION; GOVERNMENT  
 POLICIES; URBAN TRANSPORTATION; URBAN AREAS;  
 PLANNING; TECHNOLOGY ASSESSMENT; FINANCING;  
 PHOTOGRAPHS; TABLES (DATA); STATE ANALYSIS  
 AVAILABILITY: NTIS

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U.S. Dept. of Commerce, Bureau of Economic  
 Analysis

ADDRESS: Washington, DC

TITLE: 1975 Business Statistics. Twentieth  
 Biennial Edition

Biennial supplement to the Survey of Current  
 Business, v.p.

1976, May

KEYWORDS: STATISTICS; INCOME; PRICES; FINANCIAL  
 DATA; TRADE; CONSTRUCTION; EMPLOYMENT;  
 INTERNATIONAL TRADE; TRANSPORTATION; ELECTRIC  
 POWER; NATURAL GAS; PETROLEUM; COAL; TABLES  
 (DATA); INDUSTRIES; EARNINGS

AVAILABILITY: GPO \$5.10

&lt;634&gt;

U.S. Dept. of Commerce, Bureau of the Census

ADDRESS: Washington, DC

TITLE: 1967 Census of Transportation. Commodity  
 Transportation Survey - Commodity Groups;  
 Part 2, Selected Major TCC 3-Digit Classes

Report No. TC67-C3-2, 373 p.

1970, June

KEYWORDS: TRUCKS; CARGO TRANSPORTATION;  
 MANUFACTURERS; INDUSTRIES; COMMODITIES;  
 DISTRIBUTION; TABLES (DATA); WEIGHT

AVAILABILITY: GPO \$2.75

&lt;635&gt;

U.S. Dept. of Commerce, Bureau of the Census

ADDRESS: Washington, DC

TITLE: 1967 Census of Transportation. Commodity  
 Transportation Survey - Traffic Patterns of  
 Small Manufacturing Plants

Report No. TC67-C3-4, 39 p.

1970

KEYWORDS: TRAFFIC; CENSUS; MANUFACTURING;  
 INDUSTRIES; COMMODITIES; REGIONAL ANALYSIS;  
 TABLES (DATA); CARGO TRANSPORTATION; TRUCKS

AVAILABILITY: GPO \$0.50

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U.S. Dept. of Commerce, Bureau of the Census

ADDRESS: Washington, DC

TITLE: Domestic and International Transportation  
 of U.S. Foreign Trade: 1970

1972, September

SPONSOR: U.S. Dept. of Transportation, Office of  
 the Secretary, Office of Systems Analysis and  
 Information; U.S. Dept. of Defense, Army  
 Corps of Engineers, Institute for Water  
 Resources

KEYWORDS: INTERNATIONAL TRAVEL; INTERNATIONAL  
 TRADE; TRANSPORTATION; COMMODITIES; CARGO  
 TRANSPORTATION; SURVEYS; TABLES (DATA);  
 GRAPHS (CHARTS); WEIGHT; WATER  
 TRANSPORTATION; AIR TRANSPORTATION; MARINE  
 TRANSPORTATION; MAPS; EXPORTS; IMPORTS;  
 REGIONAL ANALYSIS; QUESTIONNAIRES; DISTANCE  
 AVAILABILITY: GPO

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U.S. Dept. of Commerce, Bureau of the Census,

Business Division

ADDRESS: Washington, DC

TITLE: 1972 Census of Wholesale Trade. Subject  
 Series: Petroleum Bulk Stations and Terminals



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Series No. WC72-3-2, 157 p.

1975, October

KEYWORDS: PETROLEUM; PETROLEUM PRODUCTS; STATE ANALYSIS; STORAGE; CAPACITY; REGIONAL ANALYSIS; LIQUEFIED PETROLEUM GASES; TABLES (DATA); STATISTICS; SALES; WHOLESALE TRADE; RETAIL TRADE; CAPITAL COSTS; TRANSPORTATION AVAILABILITY: GPO

## &lt;638&gt;

U.S. Dept. of Commerce, Bureau of the Census, Foreign Trade Division

ADDRESS: Washington, DC 20233

TITLE: United States Foreign Trade: Bunker Fuels. Oil and Coal Laden in the United States on Vessels Engaged in Foreign Trade

Annual and Monthly Reports, Foreign Trade Series 810, v.p.

KEYWORDS: COAL; INTERNATIONAL TRADE; DIESEL FUELS; MARINE TRANSPORTATION; FUEL OIL; USA; ENERGY CONSUMPTION; IMPORTS; EXPORTS; PETROLEUM; TABLES (DATA); HARBORS; STATISTICS; WATER TRANSPORTATION; SHIPS

## &lt;639&gt;

U.S. Dept. of Commerce, Bureau of the Census, Industry Division

ADDRESS: Washington, DC

TITLE: Annual Survey of Oil and Gas: 1976

Current Industrial Reports, Series No.

NA-134(76)-1, 45 p.

1977, December

KEYWORDS: PETROLEUM; NATURAL GAS; REVENUE; SALES; STATISTICS; EXPENDITURES; PRODUCTION; INFORMATION; GAS WELLS; OIL WELLS; GRAPHS (CHARTS); TABLES (DATA); SALES; LEASES; FINANCIAL DATA; PETROLEUM INDUSTRY

AVAILABILITY: Subscriber Services Section, Bureau of the Census, Washington, DC 20233 \$0.70

## &lt;640&gt;

U.S. Dept. of Commerce, Bureau of the Census, Population Division

ADDRESS: Washington, DC

TITLE: Consumer Income: Money Income and Poverty Status in 1975 of Families and Persons in the United States and the North Central Region, by Divisions and States (Spring 1976 Survey of Income and Education)

Current Population Reports, Series No. P-60, No. 111, 209 p.

1978, April

KEYWORDS: CONSUMERS; INCOME; REGIONAL ANALYSIS; STATE ANALYSIS; POPULATION (STATISTICS); AGE GROUPS; RACE; POVERTY; SEX

AVAILABILITY: GPO

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U.S. Dept. of Commerce, Industry and Trade Administration

ADDRESS: Washington, DC

TITLE: 1978 U.S. Industrial Outlook with 5-year Projections for 200 Industries

479 p.

1978, January

KEYWORDS: INDUSTRIAL SECTOR; CONSTRUCTION INDUSTRY; MATERIALS; COMMERCIAL SECTOR; MANUFACTURING; FORECASTING; GROWTH; LUMBER INDUSTRY; PAPER INDUSTRY; METAL INDUSTRY;

## &lt;637&gt;

TRANSPORTATION; TABLES (DATA); GRAPHS (CHARTS); CHEMICAL INDUSTRY; MARKETING; WHOLESALE TRADE; RETAIL TRADE; HOUSEHOLD GOODS; COMMUNICATION; MACHINERY; ELECTRICAL EQUIPMENT

AVAILABILITY: GPO, Stock No. 003-008-00179-3

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U.S. Dept. of Commerce, Maritime Administration, Office of Subsidy Administration

ADDRESS: Washington, DC

TITLE: Merchant Fleets of the World: Oceangoing Steam and Motor Ships of 1,000 Gross Tons and Over as of December 31, 1975

Annual report, Report No. MAR-560-20, 47 p.

1976, September

KEYWORDS: MARINE TRANSPORTATION; TONNAGE; INTERNATIONAL ANALYSIS; TANKER SHIPS; SHIPS; CARGO TRANSPORTATION; TABLES (DATA); INVENTORIES

## &lt;643&gt;

U.S. Dept. of Commerce, Maritime Administration, Office of Trade Studies and Statistics

ADDRESS: Washington, DC

TITLE: A Statistical Analysis of the World's Merchant Fleets Showing Age, Size, Speed, and Draft by Frequency Grouping as of December 31, 1976

372 p.

1977

KEYWORDS: WATER TRANSPORTATION; CARGO TRANSPORTATION; STATISTICS; INTERNATIONAL ANALYSIS; PASSENGER TRANSPORTATION; SHIPS; TONNAGE; MARINE TRANSPORTATION; WEIGHT

AVAILABILITY: GPO, Stock No. 003-007-00083-9

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U.S. Dept. of Defense, Army Corps of Engineers

ADDRESS: Vicksburg, MS

TITLE: Waterborne Commerce of the United States: Calendar Year 1976. Parts 1-5

Annual publication. v.p.

1978

KEYWORDS: WATER TRANSPORTATION; TABLES (DATA); STATISTICS; COMMERCE; WATERWAY TRANSPORTATION; REGIONAL ANALYSIS; STATE ANALYSIS; TRADE; TRAFFIC; HARBORS; COASTS; BARGES; INTERNATIONAL TRADE

AVAILABILITY: U.S. Army Engineering Division, New England, 424 Trapelo Road, Waltham, MA 02154

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U.S. Dept. of Defense, Civil Preparedness Agency

ADDRESS: Washington, DC

TITLE: Energy Emergencies

Report No. CPD 1-28, v.p.

1977, January

KEYWORDS: ENERGY EMERGENCY PLANNING; HEALTH; SAFETY; SPACE HEATING; ELECTRIC POWER DEMAND; NATURAL GAS; STATE GOVERNMENT; FUEL CONSUMPTION; ALLOCATIONS; FUEL ECONOMY; ENERGY CONSERVATION; RESIDENTIAL SECTOR; TRANSPORTATION



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U.S. Dept. of Energy  
ADDRESS: Washington, DC 20585  
TITLE: Electric and Hybrid Vehicle Program:  
Small Business Planning Grants

Program Announcement No. EH-78-N-01-4205, 45 p.  
1978

KEYWORDS: ELECTRIC VEHICLES; HYBRID  
ELECTRIC-POWERED VEHICLES; US DOE; FUNDING;  
PLANNING; RESEARCH

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U.S. Dept. of Energy, Assistant Secretary for  
Conservation and Solar Applications; U.S.  
Dept. of Energy, Assistant Secretary for  
Environment

ADDRESS: Washington, DC  
TITLE: Environmental Development Plan (EDP):  
Transportation Energy Conservation, FY 1977

Report No. DOE/EDP-0018, 163 p.  
1978, March

KEYWORDS: PLANNING; TECHNOLOGY; TRANSPORTATION;  
HIGHWAY TRANSPORTATION; ELECTRIC VEHICLES;  
ENGINES; HYBRID ELECTRIC-POWERED VEHICLES;  
ALTERNATE FUELS; SYNTHETIC FUELS; MITIGATION;  
HEALTH; SAFETY; ENVIRONMENTAL IMPACT;  
DIAGRAMS; STIRLING ENGINES; GAS TURBINE  
ENGINES; PIPELINE TRANSPORTATION; STRATIFIED  
CHARGE ENGINES; DRIVING CYCLE; FUEL  
CONSUMPTION; COMPARATIVE EVALUATIONS  
AVAILABILITY: NTIS

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U.S. Dept. of Energy, Assistant Secretary for  
Conservation and Solar Applications, Office  
of Business Assistance Programs

ADDRESS: Washington, DC 20545  
TITLE: Voluntary Business Energy Conservation  
Program: Progress Report No. 6

Semi-annual report, Report No. DOE/CS-0018/6, 160  
p.

1978, 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

<649>

U.S. Dept. of Energy, Assistant Secretary for  
Conservation and Solar Applications,  
Transportation Programs Office

ADDRESS: Washington, DC 20545  
TITLE: Proceedings of the Workshop on Urban  
Freight Consolidation

Report No. CONF-760165, Proceedings of the  
Workshop held January 13-14, 1976 in  
Knoxville, TN, 187 p.

1978, June  
SPONSOR: U.S. Dept. of Transportation; Federal  
Energy Administration; Tennessee, University  
of

KEYWORDS: CARGO TRANSPORTATION; PLANNING; DEMAND  
(ECONOMICS); URBAN TRANSPORTATION; RAIL  
TRANSPORTATION; INTERNATIONAL TRADE; TRUCKS;  
TABLES (DATA); GRAPHS (CHARTS); WATER  
TRANSPORTATION; COMMODITIES; RATES (COSTS);  
SHIPMENTS; LAND USE; SOCIO-ECONOMIC FACTORS;  
ENVIRONMENTAL IMPACT; GOVERNMENT POLICIES;  
EMPLOYMENT

<650>

U.S. Dept. of Energy, Assistant Secretary for  
Energy Technology  
ADDRESS: Washington, DC  
TITLE: Market Oriented Program Planning Study  
(MOPPS). Volume 1: Integrated Summary

Review Draft, Report No. DOE/ET-0010/1(D), 399 p.  
1977, December

KEYWORDS: RESIDENTIAL SECTOR; COMMERCIAL SECTOR;  
TRANSPORTATION; INDUSTRIAL SECTOR;  
ENVIRONMENTAL IMPACT; SUPPLY (ECONOMICS);  
TABLES (DATA); TECHNOLOGY ASSESSMENT; FOSSIL  
FUELS; COAL; SOLAR ENERGY; ENERGY  
CONSERVATION; ENERGY SUPPLIES; DEMAND  
(ECONOMICS); PLANNING; MARKET; ENERGY  
CONSUMPTION; NATURAL GAS; PETROLEUM; ELECTRIC  
POWER GENERATION; HEALTH; SAFETY; COMPARATIVE  
EVALUATIONS; GRAPHS (CHARTS); RESEARCH;  
COMMERCIALIZATION; FORECASTING

<651>

U.S. Dept. of Energy, Assistant Secretary for  
Environment; U.S. Dept. of Energy, Office of  
Technology Impacts; U.S. Dept. of Energy,  
Office of Planning Coordination

ADDRESS: Washington, DC  
TITLE: Environmental Development Plan (EDP):  
Summary and Status of Environmental  
Development Plans, FY 1978

Report No. DOE/EDP-0025, 83 p.  
1978, April

KEYWORDS: SOLAR ENERGY; GEOTHERMAL ENERGY; FOSSIL  
FUELS; COAL GASIFICATION; ENERGY  
CONSERVATION; COAL LIQUEFACTION; TECHNOLOGY;  
MAGNETOHYDRODYNAMICS; COMBUSTION; COAL;  
NUCLEAR ENERGY; BIONASS; UNCONVENTIONAL  
ENERGY SOURCES; PHOTOVOLTAIC CONVERSION; AIR  
POLLUTION; WATER POLLUTION; BUILDINGS;  
INDUSTRIAL SECTOR; TRANSPORTATION; HEALTH;  
SAFETY; SOCIO-ECONOMIC FACTORS; ENVIRONMENTAL  
IMPACT; ELECTRIC POWER; OCEAN THERMAL ENERGY  
CONVERSION  
AVAILABILITY: NTIS

<652>

U.S. Dept. of Energy, Division of Transportation  
Energy Conservation  
ADDRESS: Washington, DC

TITLE: The First Annual Report to Congress on the  
Implementation of Public Law 94-413: The  
Electric and Hybrid Vehicle Research,  
Development and Demonstration Act of 1976

Report No. DOE/CS-0002/1, 78 p.  
1977, December

KEYWORDS: ELECTRIC VEHICLES; RESEARCH PROGRAMS;  
RESEARCH; DEVELOPMENT; US DOE; GOVERNMENT  
POLICIES; DEMONSTRATION; INDUSTRIES  
AVAILABILITY: GPO, Stock No. 061-000-00024-1

<653>

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

ADDRESS: Washington, DC 20545  
TITLE: Program Planning Document: Highway  
Vehicle Alternative Fuels Utilization Program  
(AFUP)

Report No. DOE/CS-0029, v.p.  
1978, April

KEYWORDS: ALTERNATE FUELS; HIGHWAY  
TRANSPORTATION; UTILIZATION; ENERGY  
CONSUMPTION; SYNTHETIC FUELS; FUNDING;  
RESEARCH; PETROLEUM; TECHNOLOGY ASSESSMENT;

<653> CONT.  
GRAPHS (CHARTS)

<654>  
U.S. Dept. of Energy, Division of Transportation  
Energy Conservation  
ADDRESS: Washington, DC  
TITLE: Alternative Fuels Utilization Report  
  
Report No. DOE/CS-0022, v.p.  
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  
  
Report No. DOE/CS-0046, 13 p.  
1978  
KEYWORDS: ELECTRIC VEHICLES; HYBRID  
ELECTRIC-POWERED VEHICLES; US DOE; MARKET;  
DEMONSTRATION; UTILIZATION; ELECTRIC VEHICLE  
RANGE; RESEARCH  
AVAILABILITY: GPO, Stock No. 061-000-00171-9

<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  
  
Thirteenth Summary Report, Report No.  
CONF-771037, proceedings of a conference held  
October 4-6, 1977, Dearborn, Michigan, 430 p.  
1978, March  
KEYWORDS: CONFERENCES; AUTOMOTIVE ENGINES; US  
DOE; GAS TURBINE ENGINES; HEAT ENGINES; NASA;  
FUEL ECONOMY; PASSENGER TRANSPORTATION; HEAT  
EXCHANGERS; STIRLING ENGINES; DESIGN;  
ALTERNATE FUELS; TRANSPORTATION; ENERGY  
CONSERVATION; DIAGRAMS; PHOTOGRAPHS; GRAPHS  
(CHARTS)  
AVAILABILITY: NTIS

<657>  
U.S. Dept. of Energy, Economic Regulatory  
Administration  
ADDRESS: Washington, DC  
TITLE: Notice of Proposed Rulemaking and Public  
Hearing to Establish Contingency Gasoline  
Rationing Plan  
  
10 CFR Part 500, 107 p.  
KEYWORDS: GASOLINE; GOVERNMENT POLICIES;  
HEARINGS; VEHICLES; ALLOCATIONS; CONSUMERS;  
DIESEL FUELS; PURCHASING; AUTOMOBILES;  
ECONOMIC ANALYSIS; REGULATIONS; RATIONING;  
PLANNING; SHORTAGES; STATE ANALYSIS; ENERGY  
EMERGENCY PLANNING; PUBLIC SERVICES; PRICES

<658>  
U.S. Dept. of Energy, Economic Regulatory  
Administration

<653>  
ADDRESS: Washington, DC  
TITLE: Preliminary Findings and Views Concerning  
the Exemption of Kerojet Fuels from the  
Mandatory Petroleum Allocation and Price  
Regulations

Report No. DOE/ERA-0002, 104 p.  
1978, January  
KEYWORDS: AIR TRANSPORTATION; ENERGY DEMAND;  
HISTORY; ENERGY SUPPLIES; COSTS; PETROLEUM;  
TABLES (DATA); AVIATION FUELS; TURBINES;  
KEROSENE; ECONOMIC IMPACT; IMPORTS;  
DISTRIBUTION; FORECASTING; REFINERIES;  
MILITARY UTILIZATION; TRANSPORTATION;  
REGULATIONS; PRICES; MARKET; ALLOCATIONS

<659>  
U.S. Dept. of Energy, Economic Regulatory  
Administration, Office of Regulations and  
Emergency Planning  
ADDRESS: Washington, DC 20461  
TITLE: Findings and Views Concerning the  
Exemption of Motor Gasoline From the  
Mandatory Petroleum Allocation and Price  
Regulations: Supplement to September 1977  
Report

Report No. DOE/ERA-0012, 72 p.  
1978, May  
KEYWORDS: GASOLINE; PETROLEUM; ALLOCATIONS;  
REGULATIONS; EMERGENCY ENERGY PLANNING;  
GOVERNMENT POLICIES; ENERGY SHORTAGES; ENERGY  
DEMAND; PRICES; HISTORY; FUEL CONSUMPTION;  
MARKET; TABLES (DATA); SALES; FORECASTING;  
ENERGY SUPPLIES; PETROLEUM REFINERIES

<660>  
U.S. Dept. of Energy, Economic Regulatory  
Administration, Office of Regulations and  
Emergency Planning  
ADDRESS: Washington, DC  
TITLE: Environmental Assessment of the Exemption  
of Motor Gasoline from the Mandatory  
Allocation and Price Regulations

34 p.  
1978, May  
KEYWORDS: ENVIRONMENTAL IMPACT; ALLOCATIONS;  
REGULATIONS; GASOLINE; GOVERNMENT POLICIES;  
PRICES; VEHICLES; ENERGY POLICY; 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

Draft Report, 279 p.  
1978, April 13  
KEYWORDS: INDUSTRIAL SECTOR; STATE ANALYSIS;  
COMPETITION; TABLES (DATA); US DOE; SALES;  
ECONOMIC IMPACT; REGIONAL ANALYSIS; FUEL  
CONSUMPTION; GASOLINE; ENERGY SHORTAGES;  
PRICES; REGULATIONS; PETROLEUM; ALLOCATIONS;  
FORECASTING; ECONOMIC ANALYSIS; GROSS  
NATIONAL PRODUCT; EMPLOYMENT; INCOME;  
TRANSPORTATION

<662>  
U.S. Dept. of Energy, Energy Information

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&lt;662&gt; CONT.

Administration  
 ADDRESS: Washington, DC 20461  
 TITLE: Energy Information Administration Annual  
 Report to Congress: 1977. Volume I

Report No. DOE/EIA-00036/1, 106 p.

1978, February

KEYWORDS: US DOE; DATA ACQUISITION; ENERGY  
 SUPPLIES; ENERGY DEMAND; SYSTEMS ANALYSIS;  
 HISTORY

&lt;663&gt;

U.S. Dept. of Energy, Energy Information  
 Administration  
 ADDRESS: Washington, DC  
 TITLE: 1977 Energy Information Administration  
 Annual Report to Congress. Volume II:  
 Projections of Energy Supply and Demand and  
 Their Impacts. (Also Executive Summary)

Report No. DOE/EIA-0036/2 (EX SUM), 24 p.; Report  
 No. DOE/EIA-0036/2, 296 p.

1978

KEYWORDS: FORECASTING; ENERGY DEMAND; ENERGY  
 SUPPLIES; IMPORTS; TABLES (DATA); AIR  
 POLLUTION; GROWTH; GRAPHS (CHARTS); HISTORY;  
 COMPETITION; REGULATIONS; INTERNATIONAL  
 ANALYSIS; PRICES; RESIDENTIAL SECTOR;  
 TRANSPORTATION; COMMERCIAL SECTOR; INDUSTRIAL  
 SECTOR; ENERGY CONSUMPTION; ENERGY SOURCES;  
 PETROLEUM; NATURAL GAS; NUCLEAR FUELS;  
 ELECTRIC POWER; UNCONVENTIONAL ENERGY  
 SOURCES; ALTERNATE FUELS; ECONOMIC ANALYSIS;  
 ECONOMIC IMPACT; ENVIRONMENTAL IMPACT

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U.S. Dept. of Energy, Energy Information  
 Administration  
 ADDRESS: Washington, DC  
 TITLE: Energy Information Administration Annual  
 Report to Congress. Volume III: Statistics  
 and Trends of Energy Supply, Demand, and  
 Prices

Report No. DOE/EIA-0036/3, Volume III of 3  
 volumes, 145 p.

1978, May

KEYWORDS: TRANSPORTATION; STATISTICS; TABLES  
 (DATA); TRENDS; HISTORY; CONSUMERS; ENERGY  
 CONSUMPTION; ENERGY SUPPLIES; NATURAL GAS;  
 PETROLEUM; FOSSIL FUELS; EXPORTS; IMPORTS;  
 GASOLINE; SALES; GEOTHERMAL POWER GENERATION;  
 SOLAR ENERGY; DIESEL FUELS; RESIDENTIAL  
 SECTOR; PRICES; ELECTRIC POWER; NUCLEAR  
 ENERGY; GRAPHS (CHARTS)

AVAILABILITY: GPO

&lt;665&gt;

U.S. Dept. of Energy, Energy Information  
 Administration, Office of Energy Data and  
 Interpretation  
 ADDRESS: Washington, DC 20461  
 TITLE: Supply, Demand, and Stocks of All Oils by  
 P.A.D. Districts and Imports into the United  
 States, by Country: 1977

Annual Report, Energy Data Reports (formerly  
 Mineral Industry Surveys), 10 p.

1978, May 31

KEYWORDS: PETROLEUM; IMPORTS; PRODUCTION;  
 REGIONAL ANALYSIS; PETROLEUM PRODUCTS; ENERGY  
 DEMAND; TABLES (DATA)

&lt;666&gt;

U.S. Dept. of Energy, Nevada Operations Office  
 ADDRESS: Las Vegas, NV  
 TITLE: Driver Aid and Education Test Project.  
 Final Report

Report No. DOE/CS-0043, v.p.

1978, July

SPONSOR: U.S. Dept. of Energy, Division of  
 Transportation Energy Conservation  
 KEYWORDS: AUTOMOBILE DRIVERS; EDUCATION;  
 AUTOMOTIVE FUELS; FUEL ECONOMY; AUTOMOBILES;  
 TRUCKS; TESTING; MEASURING INSTRUMENTS;  
 DRIVING CYCLE; FEEDBACK; TABLES (DATA);  
 GRAPHS (CHARTS); MONTHLY VARIATIONS  
 AVAILABILITY: NTIS

&lt;667&gt;

U.S. Dept. of Energy, Office of Public Affairs  
 ADDRESS: Washington, DC 20461  
 TITLE: DOE Proposes Emergency Gasoline Rationing  
 Plan

Department of Energy Information Press Release,  
 E-78-219, 8 p.

1978, June 22

KEYWORDS: RATIONING; HEARINGS; ENERGY POLICY;  
 GASOLINE; ALLOCATIONS; SALES; MARKETING;  
 VEHICLES; PETROLEUM; GOVERNMENT POLICIES;  
 AUTOMOBILES; PUBLIC SERVICES; CONSUMERS;  
 PLANNING; ENERGY POLICY AND CONSERVATION ACT;  
 ENERGY EMERGENCY PLANNING

&lt;668&gt;

U.S. Dept. of Energy, Office of the Under  
 Secretary, Task Force on Alcohol Fuels  
 ADDRESS: Washington, DC 20545  
 TITLE: Alcohol Fuels Program Plan

Report No. DOE/US-0001/2, v.p.

1978, March

KEYWORDS: ALCOHOLS; ETHANOL; METHANOL; LIQUID  
 FUELS; ALTERNATE FUELS; SOCIO-ECONOMIC  
 FACTORS; INDUSTRIAL SECTOR; PRICES; ECONOMIC  
 ANALYSIS; ENERGY RESOURCES; PETROLEUM; ENERGY  
 EMERGENCY PLANNING; COAL; BIOMASS; SOLID  
 WASTES; PLANNING; UTILIZATION; RESEARCH;  
 ENVIRONMENTAL IMPACT; TABLES (DATA)

AVAILABILITY: GPO, Stock No. 061-000-00064-0

&lt;669&gt;

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

Report No. DOE/US-0001/1, v.p.

1978, March

KEYWORDS: ALCOHOL FUELS; ALTERNATE FUELS; US DOE;  
 ETHANOL; METHANOL; COMMERCIALIZATION;  
 PRODUCTION; FUEL CONSUMPTION; COSTS;  
 UTILIZATION; PLANNING; RESEARCH; GOVERNMENT  
 POLICIES

&lt;670&gt;

U.S. Dept. of Interior, Bureau of Mines  
 ADDRESS: Washington, DC  
 TITLE: Minerals Yearbook: 1975. Volume 1.  
 Metals, Minerals, and Fuels

Annual report, 1550 p.

1977

KEYWORDS: MINERALS; STATISTICS; TABLES (DATA);

## &lt;670&gt; CONT.

METALS; FOSSIL FUELS; PRODUCTION; MINING;  
EXTRACTION; INDUSTRIES; COAL; NATURAL GAS;  
PETROLEUM PRODUCTS; URANIUM; STATE ANALYSIS;  
REGIONAL ANALYSIS; INTERNATIONAL TRADE  
AVAILABILITY: GPO, Stock No. 024-004-01922-1

## &lt;671&gt;

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); METALS; ENERGY SUPPLIES;  
COMMODITIES; TABLES (DATA); ENERGY SOURCES  
AVAILABILITY: GPO

## &lt;672&gt;

U.S. Dept. of Interior, Bureau of Mines  
ADDRESS: Washington, DC  
TITLE: Status of the Mineral Industries: 1977

46 p.

1977

KEYWORDS: MINERALS; INDUSTRIES; MINING; METALS;  
GRAPHS (CHARTS); STEELS; PRODUCTION;  
ALUMINUM; TRANSPORTATION; ECONOMICS;  
PETROLEUM REFINING; IMPORTS; EXPORTS;  
INTERNATIONAL TRADE; CONSTRUCTION MATERIALS;  
ENERGY RESOURCES; COAL; PETROLEUM; NUCLEAR  
FUELS; NATURAL GAS; URANIUM; IRON;  
RECLAMATION; PLASTICS

## &lt;673&gt;

U.S. Dept. of Interior, Bureau of Mines, Division  
of Fuels Data  
ADDRESS: Washington, DC 20241  
TITLE: Mineral Industry Surveys: Petroleum  
Refineries in the United States and Puerto  
Rico, January 1, 1977

Annual report, 17 p.

1977, July 18

KEYWORDS: PETROLEUM; PUERTO RICO; PETROLEUM  
REFINERIES; PRODUCTION; CAPACITY;  
DISTILLATION; REGIONAL ANALYSIS; TABLES  
(DATA); CONSTRUCTION; STATE ANALYSIS

## &lt;674&gt;

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: BUDGETS; GOVERNMENT POLICIES;  
TRANSPORTATION; TABLES (DATA); RAIL  
TRANSPORTATION; HIGHWAY TRANSPORTATION; AIR  
TRANSPORTATION; LEGISLATION; SAFETY; URBAN  
TRANSPORTATION; MASS TRANSPORTATION

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U.S. Dept. of Transportation  
ADDRESS: Washington, DC 20590

TITLE: U.S. Department of Transportation. 10th  
Annual Report: Fiscal Year 1976

Annual Report for Fiscal Year 1976, 97 p.  
1978

KEYWORDS: US DOT; TRANSPORTATION; TABLES (DATA);  
WATER TRANSPORTATION; AIR TRANSPORTATION;  
RAIL TRANSPORTATION; HIGHWAY TRANSPORTATION;  
MASS TRANSPORTATION; MATERIALS; SAFETY;  
RAILROADS

AVAILABILITY: GPO, Stock No. 500-000-00137-7

## &lt;676&gt;

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

## &lt;677&gt;

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

Report No. 2, 45 p.

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

## &lt;678&gt;

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

Report No. 3, 54 p.

1975, January 10

KEYWORDS: FUEL ECONOMY; MILEAGE; AUTOMOTIVE  
EMISSIONS; AIR QUALITY; DIESEL ENGINES;  
TABLES (DATA); TRUCKS; FORECASTING; GROWTH;  
HYDROCARBONS; CARBON MONOXIDE; NITROGEN  
OXIDES; AUTOMOBILES; HISTORY; GASOLINE;  
MODELS; TRANSPORTATION

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U.S. Dept. of Transportation, Coast Guard  
ADDRESS: Washington, DC 20590  
TITLE: Boating Statistics: 1977

Nineteenth annual report, Report No. CG-357, 41 p.  
1978, May 1

KEYWORDS: BOATS; SAFETY; ACCIDENTS; STATE  
ANALYSIS; TABLES (DATA)

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U.S. Dept. of Transportation, Coast Guard  
 ADDRESS: Washington, DC  
 TITLE: Recreational Boating in the Continental  
 United States in 1973 and 1976: The  
 Nationwide Boating Survey

Report No. AD-A052907, CG-B-003-78, v.p.  
 1978, March

KEYWORDS: RECREATION; TRANSPORTATION; BOATS;  
 SAFETY; SURVEYS; QUESTIONNAIRES;  
 COMMUNICATION; EQUIPMENT; ACCIDENTS; WATER  
 TRANSPORTATION; MAPS; TABLES (DATA)  
 AVAILABILITY: NTIS

&lt;681&gt;

U.S. Dept. of Transportation, Coast Guard, Marine  
 Safety Council  
 ADDRESS: Washington, DC  
 TITLE: Final Environmental Impact Statement:  
 Regulations for U.S. Tank Vessels Carrying  
 Oil in Foreign Trade and Foreign Tank Vessels  
 that Enter the Navigable Waters of the United  
 States

Final Report, 131 p.  
 1976, October

KEYWORDS: POLLUTION REGULATIONS; MARINE  
 TRANSPORTATION; INTERNATIONAL TRADE;  
 PETROLEUM; TANKER SHIPS; WATER POLLUTION;  
 ENVIRONMENTAL IMPACT; CONSTRUCTION; DESIGN;  
 ECONOMIC IMPACT

&lt;682&gt;

U.S. Dept. of Transportation, Federal Aviation  
 Administration  
 ADDRESS: Washington, DC 20591  
 TITLE: Report to Congress by the Federal Aviation  
 Administration on the Energy Efficiency of  
 Agency Regulations

Report No. AD/A-034611, 120 p.  
 1976, December

KEYWORDS: AVIATION FUELS; AIR TRANSPORTATION;  
 AIRCRAFT; TRAFFIC; REGULATIONS; FUEL  
 CONSUMPTION; TESTING; NOISE (SOUND); AIR  
 POLLUTION CONTROL EQUIPMENT; VELOCITY;  
 EQUIPMENT; FUEL ECONOMY; EFFICIENCY  
 AVAILABILITY: NTIS

&lt;683&gt;

U.S. Dept. of Transportation, Federal Aviation  
 Administration, Office of Aviation Policy  
 ADDRESS: Washington, DC 20591  
 TITLE: Aviation Forecasts - Fiscal Years 1978-1989

Report No. FAA-AVP-77-32, 169 p.  
 1977, September

KEYWORDS: FORECASTING; AVIATION; STATISTICS;  
 AIRCRAFT; SOCIO-ECONOMIC FACTORS; COMMUTING;  
 ECONOMETRIC MODELS; AIR TRANSPORTATION;  
 PHOTOGRAPHS; REGIONAL ANALYSIS; REVENUE;  
 PASSENGER TRANSPORTATION; CARGO  
 TRANSPORTATION; TABLES (DATA); GRAPHS  
 (CHARTS); MATHEMATICAL MODELS; AIRPORTS

&lt;684&gt;

U.S. Dept. of Transportation, Federal Aviation  
 Administration, Office of Aviation Policy  
 ADDRESS: Washington, DC 20591  
 TITLE: Terminal Area Forecast - 1978-1988

Report No. FAA-AVP-77-17, v.p.  
 1977, April 8

KEYWORDS: FORECASTING; PASSENGER ENPLANEMENTS;  
 AIRPORTS; MAPS; REGIONAL ANALYSIS; TABLES  
 (DATA); GROWTH; AIR TRANSPORTATION; AVIATION  
 AVAILABILITY: NTIS

&lt;685&gt;

U.S. Dept. of Transportation, Federal Aviation  
 Administration, Office of Aviation Policy  
 ADDRESS: Washington, DC 20591  
 TITLE: Third Annual FAA Forecast Conference  
 Proceedings

Report No. FAA-AVP-78-7, proceedings of  
 conference held in Reston, Virginia, December  
 1977, 68 p.

1978, June

KEYWORDS: FORECASTING; AIR TRANSPORTATION;  
 FEDERAL AVIATION ADMINISTRATION; PLANNING;  
 STATE GOVERNMENT; LOCAL GOVERNMENT;  
 CONNUTERS; CONFERENCES

&lt;686&gt;

U.S. Dept. of Transportation, Federal Aviation  
 Administration, Office of Aviation Policy,  
 Aviation Forecast Branch  
 ADDRESS: Washington, DC 20591  
 TITLE: Profiles of International Passengers at  
 U.S. Airports, 1976

Report No. FAA-AVP-77-27, 319 p.  
 1977, April

KEYWORDS: AIRPORTS; INTERNATIONAL TRAVEL;  
 PASSENGER TRANSPORTATION; AIR TRANSPORTATION;  
 TABLES (DATA); GRAPHS (CHARTS); PASSENGER  
 ENPLANEMENTS; REGIONAL ANALYSIS

&lt;687&gt;

U.S. Dept. of Transportation, Federal Aviation  
 Administration, Office of Management Systems,  
 Information and Statistics Division  
 ADDRESS: Washington, DC 20591  
 TITLE: Current Aviation Statistics: Air Traffic  
 Activity, Fiscal Year 1976

Report No. AD-A032605, 22 p.

1976, November

KEYWORDS: AIR TRANSPORTATION; STATISTICS; TABLES  
 (DATA); TRAFFIC; AIRPORTS; AIRCRAFT; SERVICES  
 AVAILABILITY: NTIS

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U.S. Dept. of Transportation, Federal Highway  
 Administration  
 ADDRESS: Washington, DC  
 TITLE: Highway Statistics, Summary to 1975

Report No. PB-273520, FHWA-HF-NS-375, 294 p.  
 1977

KEYWORDS: HIGHWAY TRANSPORTATION; STATISTICS;  
 HISTORY; UTILIZATION; FINANCING; FUELS;  
 VEHICLES; LICENSING; AUTOMOBILE DRIVERS;  
 TAXES; STATE GOVERNMENT; VEHICLE  
 REGISTRATIONS; TRAVEL; LOCAL GOVERNMENT;  
 TABLES (DATA)  
 AVAILABILITY: NTIS; GPO, Stock No. 050-001-00129-2

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U.S. Dept. of Transportation, Federal Highway  
 Administration  
 ADDRESS: Washington, DC

<689> COFT.  
 TITLE: Computer Programs for Urban Transportation  
 Planning: PLANPAC/BACKPAC. General  
 Information Manual

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. 4, 32 p.  
 1975, July  
 KEYWORDS: TRANSPORTATION; TRAVEL; TRAVEL TIME;  
 MILEAGE; SCHOOLS; CHILDREN; BUSES (VEHICLES);  
 BICYCLES; PUBLIC TRANSPORTATION; SURVEYS;  
 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:  
 Mode of Transportation and Personal  
 Characteristics of Tripmakers

Report No. 9, 49 p.  
 1973, November  
 KEYWORDS: TRAVEL; PUBLIC TRANSPORTATION; MOTOR  
 VEHICLES; TRANSPORTATION MODE CHOICE;  
 PASSENGER TRANSPORTATION; AGE GROUPS;  
 SURVEYS; CENSUS; AIR TRANSPORTATION; TRUCKS;  
 VEHICLE MILES TRAVELED; DISTANCE;  
 SOCIO-ECONOMIC FACTORS; TABLES (DATA)  
 AVAILABILITY: GPO

<692>  
 U.S. Dept. of Transportation, Federal Highway  
 Administration  
 ADDRESS: Washington, DC  
 TITLE: Highway Statistics: 1976

Report No. FHWA-RP-76-76, 161 p.  
 1976  
 KEYWORDS: HIGHWAYS; STATISTICS; HIGHWAY  
 TRANSPORTATION; VEHICLES; LICENSES;  
 AUTOMOTIVE FUELS; FUEL CONSUMPTION; TAXES;  
 STATE GOVERNMENT; VEHICLE REGISTRATIONS;  
 REVENUE; RATES (COSTS); TRAVEL; VELOCITY;  
 SPEED LIMITS; FINANCING; GOVERNMENT POLICIES;  
 ROADS; MILEAGE; TABLES (DATA); OWNERSHIP;  
 EXPENDITURES; 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

61p.

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 Review of Factors Influencing Railroad  
 Electrification

V.P.  
 1974  
 KEYWORDS: RAIL TRANSPORTATION; RAILROADS;  
 ELECTRIC VEHICLES; CAPITAL; EUROPE; JAPAN;  
 RAILROADS; MILEAGE; 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

Report No. DOT-HS-803207, 45 p.  
 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

Report No. DOT-HS-802611, 36 p.  
 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

Report No. DOT-HS-803362, Summary Report of the  
 Automotive Fuel Economy Research and Analysis  
 Program Contractors' Coordination Meeting  
 held in Washington, DC, April 24-26, 1978,  
 899 p.

1978  
 KEYWORDS: FUEL ECONOMY; FUEL CONSUMPTION;  
 MEETINGS; STANDARDS; TRANSPORTATION;  
 EFFICIENCY; RESEARCH PROGRAMS; DATA  
 COLLECTION; STATISTICS; TECHNOLOGY;  
 ENGINEERING; MANUFACTURING; MARKETING;  
 GOVERNMENT POLICIES; DIESEL ENGINES; SPARK  
 IGNITION ENGINES; AUTOMOTIVE TRANSMISSIONS;  
 CONSUMERS; MAINTENANCE; VEHICLES; TESTING;



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&lt;697&gt; CONT.

LUBRICANTS; DEMAND (ECONOMICS); ECONOMIC  
MODELS; FORECASTING; TABLES (DATA); GRAPHS  
(CHARTS); PHOTOGRAPHS; WEIGHT; COSTS;  
AUTOMOTIVE INDUSTRY; BEHAVIOR; ENVIRONMENTAL  
PROTECTION AGENCY

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

ADDRESS: Washington, DC 20590

TITLE: Fuel Economy ... A Subject Bibliography  
from Highway Safety Literature

Report No. PB-265387, DOT HS-802 147, v.p.

1977, January

KEYWORDS: BIBLIOGRAPHIES; HIGHWAY TRANSPORTATION;  
FUEL ECONOMY; ENERGY CONSERVATION;  
PERFORMANCE; PASSENGER TRANSPORTATION;  
TRUCKS; GASOLINE; FUEL CONSUMPTION;  
AUTOMOTIVE EMISSIONS; GOVERNMENT POLICIES;  
REGULATIONS; AUTOMOBILES; ENGINES; SAFETY  
AVAILABILITY: HTIS

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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, Pursuant to Section 3,  
Public Law 89-139

Congressional Committee Print No. 95-29, 483 p.

1977, September

SPONSOR: U.S. House of Representatives, Committee  
on Public Works and Transportation

KEYWORDS: HIGHWAYS; TRAVEL; PERFORMANCE;  
INVESTMENTS; REGIONAL ANALYSIS; FORECASTING;  
TABLES (DATA); GRAPHS (CHARTS)

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

ADDRESS: Washington, DC

TITLE: 1974 National Transportation Study.  
Manual I: General Information

Report No. OMB-04-S-72004, 66 p.

1972, May

KEYWORDS: TRANSPORTATION; STATE ANALYSIS;  
SURVEYS; PLANNING; ORGANIZATIONS; STATE  
GOVERNMENT; AIRPORTS; HIGHWAYS;  
TRANSPORTATION SYSTEMS; GOVERNMENT POLICIES;  
EFFICIENCY; SAFETY; ENVIRONMENTAL IMPACT;  
TABLES (DATA)

&lt;701&gt;

U.S. Dept. of Transportation, Office of  
Transportation Planning Analysis

ADDRESS: Washington, DC

TITLE: Catalog of Tabulations: 1974 National  
Transportation Study

v.p.

1975, February

KEYWORDS: TRANSPORTATION; STATE ANALYSIS; TABLES  
(DATA); URBAN TRANSPORTATION; CAPITAL COSTS;  
GROWTH; HIGHWAYS; BUSES (VEHICLES); AIRPORTS;  
RAIL TRANSPORTATION; COMPUTERS; VEHICLE MILES  
TRAVELED

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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

v.p.

1976, October

KEYWORDS: ELDERLY; RURAL TRANSPORTATION;  
PASSENGER TRANSPORTATION; POVERTY; RURAL  
AREAS; POPULATION (STATISTICS); OWNERSHIP;  
TABLES (DATA); SOCIO-ECONOMIC FACTORS;  
REGIONAL ANALYSIS; PUBLIC TRANSPORTATION;  
AUTOMOBILES; MOBILITY; TRANSPORTATION  
SYSTEMS; TRANSPORTATION DISADVANTAGED; STATE  
ANALYSIS

&lt;703&gt;

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

79 p.

1977, May

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 EVALUATIONS; REGIONAL ANALYSIS;  
CANADA; RIGHT-OF-WAY; TABLES (DATA); MAPS

&lt;704&gt;

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; MINNESOTA; SOUTH CAROLINA;  
PASSENGER TRANSPORTATION; PLANNING;  
PENNSYLVANIA; ELDERLY; BIBLIOGRAPHIES; STATE  
ANALYSIS; TRANSPORTATION DISADVANTAGED

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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, 41 p.

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; DIRECTORIES;  
MANUFACTURERS; FUEL CONSUMPTION; PERFORMANCE



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U.S. Dept. of Transportation, Transportation Systems Center, Transportation Information Division  
 ADDRESS: Kendall Square, Cambridge, MA 02142  
 TITLE: Transportation Safety Information Report: October, November, and December 1977 and Annual Summary

Quarterly Report, Report No. HTISUS/C/224-004, DOT-TSC-P24-77-4, 113 p.

1978, March

SPONSOR: U.S. Dept. of Transportation, Office of the Secretary, Office of the Assistant Secretary for Policy, Plans, and International Affairs  
 KEYWORDS: TRANSPORTATION; SAFETY; ACCIDENTS; INJURIES; GRAPHS (CHARTS); TABLES (DATA)  
 AVAILABILITY: NTIS

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U.S. Dept. of Transportation, Transportation Systems Center, Transportation Information Division  
 ADDRESS: Kendall Square, Cambridge, MA 02142  
 TITLE: Profiles of Scheduled Air Carrier Passenger Traffic for Top 100 U.S. Airports, August 6, 1976

Report No. FAA-AVP-77-30, 207 p.

1977, July

SPONSOR: U.S. Dept. of Transportation, Federal Aviation Administration, Office of Aviation Policy, Aviation Forecast Branch  
 KEYWORDS: AIR TRANSPORTATION; AIRCRAFT; TRAFFIC; PASSENGER TRANSPORTATION; AIRPORTS; TABLES (DATA); GRAPHS (CHARTS); PASSENGER PLACEMENTS; SERVICES

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U.S. Dept. of Transportation, Urban Mass Transportation Administration  
 ADDRESS: Washington, DC 20590  
 TITLE: Urban Mass Transportation Act of 1964 and Related Laws, as Amended Through February 5, 1976

131 p.

KEYWORDS: URBAN TRANSPORTATION; MASS TRANSPORTATION; LEGISLATION; GOVERNMENT POLICIES; REGULATIONS  
 AVAILABILITY: GPO, Stock No. 050-014-00007-0/Catalog No. TD 7.5:UR1/3

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U.S. Dept. of Transportation, Urban Mass Transportation Administration, Office of Technology Development and Deployment, Office of AGT Applications; U.S. Dept. of Transportation, Transportation Systems Center, Technology Sharing Program Office  
 ADDRESS: DOT/UMTA, Trans Point Building, 2100 2nd Street SW, Washington, DC 20590; DOT/TSC, Kendall Square, Cambridge, MA 02142  
 TITLE: People Mover Profiles

35 p.

1977, May

KEYWORDS: PASSENGER TRANSPORTATION; URBAN AREAS; PHOTOGRAPHS; DEMONSTRATION; OPERATION; PERFORMANCE; AUTOMATED GUIDEWAY TRANSIT  
 AVAILABILITY: GPO

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U.S. Dept. of Transportation, Urban Mass Transportation Administration, Policy and Program Development, Office of Program Evaluation  
 ADDRESS: Washington, DC 20590  
 TITLE: The UMTA Rail Modernization Program. The Distribution of Capital Grant Funds for Rail Rehabilitation and Modernization, 1965-1977

1976, July

KEYWORDS: RAIL TRANSPORTATION; CAPITAL COSTS; ENERGY CONSUMPTION; RAPID TRANSIT SYSTEMS; GROWTH; GOVERNMENT POLICIES; REGIONAL ANALYSIS; US DOT; MAINTENANCE; RETROFITTING; MODERNIZATION; OPERATING COSTS; EMPLOYMENT; PASSENGER TRANSPORTATION; COMMENTS; TABLES (DATA); RAILROADS; FUNDING

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U.S. Environmental Protection Agency, Emission Control Technology Division, Standards Development and Support Branch  
 ADDRESS: Ann Arbor, MI 48105  
 TITLE: The Effect of Dynamometer Inertia Increment and Power Setting on Emissions and Fuel Economy for Motorcycles. Technical Support Report for Regulatory Action

Report No. PB-270721, HC 75-03, 13 p.

1975, August

KEYWORDS: MOTORCYCLES; DYNAMOMETERS; EMISSIONS; FUEL CONSUMPTION; TABLES (DATA); FUEL ECONOMY; TESTING; MOMENT OF INERTIA; WEIGHT  
 AVAILABILITY: NTIS

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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

Report No. PB-270710, HC 76-02, 15 p.

1976, January

KEYWORDS: SURVEYS; UTILIZATION; MOTORCYCLES; SIZE; TRANSPORTATION; EMISSIONS; COMMENTING; VEHICLE TRIPS; VELOCITY; TABLES (DATA); INFORMATION NEEDS  
 AVAILABILITY: NTIS

&lt;713&gt;

U.S. Environmental Protection Agency, Office of Transportation and Land Use Policy  
 ADDRESS: Washington, DC 20460  
 TITLE: Bicycle Strategies to Reduce Air Pollution

Report No. EPA-400/9-78-008, 20 p.

1978, June

KEYWORDS: BICYCLES; AIR POLLUTION; ENVIRONMENTAL PROTECTION AGENCY; COMMUNITY DEVELOPMENT; EDUCATION; PLANNING; ROADS

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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

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KEYWORDS: US DOE; HEARINGS; ENERGY POLICY;  
GOVERNMENT POLICIES

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U.S. International Trade Commission  
ADDRESS: Washington, DC 20436  
TITLE: Automotive Trade Statistics, 1964-76

Series B, USITC Publication No. 839, 103 p.  
1977, October

KEYWORDS: AUTOMOBILES; STATISTICS; TABLES (DATA);  
INTERNATIONAL TRADE; IMPORTS; SALES; EXPORTS;  
CONSUMPTION; PRICES; VEHICLE REGISTRATIONS

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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, 180 p.

1977

KEYWORDS: ECONOMIC IMPACT; ENERGY POLICY;  
NATIONAL ENERGY PLAN; TAXES; GASOLINE; FUEL  
ECONOMY; TRANSPORTATION; THERMAL INSULATION;  
ENERGY CONSERVATION; INDUSTRIAL SECTOR;  
UTILITIES; PRICES; PETROLEUM; NATURAL GAS;  
COAL; RESEARCH; NUCLEAR ENERGY; NUCLEAR  
REACTOR SAFETY; SOLAR ENERGY

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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,  
233 p.

1977, March

KEYWORDS: REGULATIONS; PETROLEUM; PRICES;  
ECONOMIC IMPACT; SUPPLY (ECONOMICS);  
PRODUCTION; TABLES (DATA); GRAPHS (CHARTS);  
LEGISLATION; GOVERNMENT POLICIES  
AVAILABILITY: U.S. Senate Committee on Energy and  
Natural Resources

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U.S. Senate, Committee on Energy and Natural  
Resources, Subcommittee on Energy  
Conservation and Regulation  
ADDRESS: Washington, DC  
TITLE: Mandatory Energy Conservation Amendments  
to President Carter's Energy Program

Congressional Committee Print, 95th Congress, 1st  
Session, Serial No. 95-102, hearings held  
July 25, 26 and August 1, 1977, 748 p.

1978

KEYWORDS: AUTOMOBILES; NATIONAL ENERGY PLAN;  
ENERGY CONSERVATION; TRANSPORTATION;  
GOVERNMENT POLICIES; EQUIPMENT; EFFICIENCY;  
STANDARDS; RESIDENTIAL SECTOR; SPACE HEATING;  
ELECTRIC MOTORS; ELECTRIC POWER DEMAND;  
FURNACES; ENERGY CONSUMPTION; BEVERAGES; FUEL  
ECONOMY; TRUCKS; TABLES (DATA)

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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 I,  
992 p. for Part 2, hearings held April 4 and  
6, 1977

1977

KEYWORDS: ENERGY CONSERVATION; GOVERNMENT  
POLICIES; ENERGY SHORTAGES; IMPORTS;  
PETROLEUM; ENERGY RESOURCES; ENERGY  
CONSUMPTION; INDUSTRIAL SECTOR;  
TRANSPORTATION; SOLAR ENERGY; PRICES; INCOME;  
ENERGY SUPPLIES; RESIDENTIAL SECTOR;  
RETROFITTING; BUILDINGS; APPLIANCES; GRAPHS  
(CHARTS); COSTS; COGENERATION; ELECTRIC  
POWER; TABLES (DATA); PERFORMANCE; STANDARDS;  
AUTOMOBILES; EQUIPMENT

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U.S. Senate, Committee on Energy and Natural  
Resources, Subcommittee on Energy  
Conservation and Regulation  
ADDRESS: Washington, D.C.  
TITLE: Diesel Fuel and Gasoline Conservation Act  
of 1977

Congressional Committee Print, 95th Congress, 1st  
Session, Serial 95-104, hearings held June  
27, 1977, 130 p.

1978

KEYWORDS: DIESEL FUELS; GASOLINE; ENERGY  
CONSERVATION; US DEPT OF COMMERCE; GOVERNMENT  
POLICIES; TRUCKS; TRANSPORTATION; FOOD  
INDUSTRY; CONSUMERS; MANUFACTURERS;  
DISTRIBUTION; FUEL CONSUMPTION; LEGISLATION;  
CARGO TRANSPORTATION

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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.

1977

KEYWORDS: US DOE; LEGISLATION; ENERGY POLICY;  
GOVERNMENT POLICIES; US FEA; US ERDA; FEDERAL  
POWER COMMISSION; ENERGY CONSERVATION;  
REGULATIONS  
AVAILABILITY: GPO

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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, 11, 16, 17, 18, 22, 24, 25, 29,  
31 and April 8, 1977, 1322 p.

1977

KEYWORDS: US DOE; ENERGY POLICY; LEGISLATION;  
GOVERNMENT POLICIES; HEARINGS  
AVAILABILITY: GPO

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U.S. Travel Data Center

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ADDRESS: Suite 450, 1100 Connecticut Ave. NW,  
Washington, DC 20036  
TITLE: 1976 National Travel Survey: Full Year  
Report

1977

KEYWORDS: TRAVEL; SURVEYS; TABLES (DATA);  
TOURISM; AUTOMOBILES; TRUCKS; AIR  
TRANSPORTATION; REGIONAL ANALYSIS; VEHICLE  
TRIPS  
AVAILABILITY: \$20.00

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U.S. Travel Data Center  
ADDRESS: Suite 410, 1100 Connecticut Avenue NW,  
Washington, DC 20036  
TITLE: Proceedings: 1978 Travel Outlook Forum  
Proceedings of conference held Washington Hilton  
Hotel, Washington, D.C., December 1, 1977,  
171 p.

1978

SPONSOR: Travel Research Association  
KEYWORDS: TRANSPORTATION; TRAVEL; ENERGY POLICY;  
FUEL CONSUMPTION; ENERGY CONSERVATION;  
NATIONAL ENERGY PLAN; GRAPHS (CHARTS);  
TOURISM; ECONOMIC ANALYSIS; INTERNATIONAL  
TRAVEL; AIR TRANSPORTATION; RECREATIONAL  
TRAVEL; AUTOMOBILES; BUSES (VEHICLES); RAIL  
TRANSPORTATION; HOTELS; TABLES (DATA)  
AVAILABILITY: \$25.00

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U.S. Travel Data Center  
ADDRESS: 1100 Connecticut Ave. NW, Washington, DC  
20036  
TITLE: Survey of State Travel Offices: 1977-1978  
Annual Report, 82 p.  
1977, October 11  
KEYWORDS: TRAVEL; TOURISM; STATE ANALYSIS; PUBLIC  
RELATIONS

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U.S. Travel Data Center  
ADDRESS: Washington, DC 20036  
TITLE: 1976 National Travel Expenditure Study:  
Summary Report

114 p.

1977, December 15

KEYWORDS: TRAVEL; EXPENDITURES; AUTOMOBILES;  
TRUCKS; AIR TRANSPORTATION; VEHICLE TRIPS;  
STATISTICS; HOTELS; PUBLIC TRANSPORTATION;  
TABLES (DATA); FOOD; WEEKEND TRAVEL;  
SOCIO-ECONOMIC FACTORS; VEHICLE MILES  
TRAVELED; BUSES (VEHICLES); RAIL  
TRANSPORTATION  
AVAILABILITY: \$25.00

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U.S. Travel Data Center  
ADDRESS: 1100 Connecticut Avenue NW, Washington  
DC 20036  
TITLE: The Impact of Travel on State Economies:  
1976

56 p.

1978

KEYWORDS: TOURISM; TRAVEL; STATE ANALYSIS;  
VEHICLE MILES TRAVELED; EXPENDITURES;  
AUTOMOBILES; PUBLIC TRANSPORTATION; FOOD;  
REVENUE; HOTELS; EMPLOYMENT; STATISTICS;

TABLES (DATA); PAYROLLS; ECONOMIC IMPACT  
AVAILABILITY: \$15.00

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Ulrichson, D.L.  
Iowa State University, Dept. of Science and  
Technology  
ADDRESS: Ames, IA 50011  
TITLE: Fleet Test of Re-Refined Oil. First  
Annual Progress Report

Report No. COO-4074-3, 10 p.

1977, May

SPONSOR: Energy Research and Development  
Administration  
KEYWORDS: LUBRICATING OILS; PETROLEUM PRODUCTS;  
TESTING; PERFORMANCE; AUTOMOBILES; TRUCKS;  
AUTOMOTIVE FLEETS; TRANSPORTATION;  
COMPARATIVE EVALUATIONS; TABLES (DATA); OILS;  
PETROLEUM REFINING  
AVAILABILITY: NTIS

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Underhill, B.; Gott, P.; Huxter, D.; Mathews, M.;  
Metcalf, E.; Nicol, J.; Parry, J.; Stratton,  
L.; Strong, S.; Sullivan, D.; Teeters, P.;  
Whittier, A.  
Little (Arthur D.) Inc.  
ADDRESS: 25 Acorn Park, Cambridge, MA 02140  
TITLE: Recommended Performance Standards for  
Electric and Hybrid Vehicles

Report No. SAN/1335-1, 164 p.

1977, September

SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: ELECTRIC VEHICLES; HYBRID  
ELECTRIC-POWERED VEHICLES; PERFORMANCE;  
STANDARDS; RESEARCH; QUESTIONNAIRES; SURVEYS;  
TABLES (DATA); GRAPHS (CHARTS)

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Union College, Graduate Studies and Continuing  
Education  
ADDRESS: Schenectady, NY 12308  
TITLE: Fourth National Conference on the "Effects  
of Energy Constraints on Transportation  
Systems"

Proceedings of a conference held at Union  
College, Schenectady, New York, on August  
1-5, 1977, v.p.

1977

SPONSOR: Energy Research and Development  
Administration, Division of Transportation  
Energy Conservation  
KEYWORDS: TRANSPORTATION; CONFERENCES; ENERGY  
SHORTAGES; PLANNING; EFFICIENCY; INTERCITY  
TRANSPORTATION; PASSENGER TRANSPORTATION;  
CARGO TRANSPORTATION; AIR TRANSPORTATION;  
INTRACITY TRANSPORTATION; RAIL  
TRANSPORTATION; GOVERNMENT POLICIES; ELECTRIC  
VEHICLES; RESEARCH; ENERGY CONSUMPTION

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Bunnewehr, L.R.; Knoop, C.W.  
Ford Motor Co., Ford Research Staff  
TITLE: Electrical Component Modeling and Sizing  
for RV Simulation

Paper No. 780215, presented at the Society of  
Automotive Engineers' Congress and  
Exposition, Cobo Hall, Detroit, Michigan,

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February 27 - March 3, 1978, 13 p.

1978

KEYWORDS: ELECTRIC VEHICLES; MODELS; PERFORMANCE;  
ELECTRIC VEHICLE RANGE; DRIVING CYCLE;  
BATTERIES; SIZE; GRAPHS (CHARTS)AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096 \$2.50

Office Building, Providence, RI 02903

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Urban Consortium for Technology Initiatives,  
Transportation Task Force; Public Technology  
Inc.ADDRESS: PTI, 1140 Connecticut Ave NW,  
Washington, DC 20036

TITLE: Urban Goods Movement

Information Bulletin, 22 p.

1978, February

SPONSOR: U.S. Dept. of Transportation

KEYWORDS: COMMODITIES; CARGO TRANSPORTATION;  
TRUCKS; RAILROADS; LOCAL GOVERNMENT; URBAN  
AREAS; TRAFFIC; INSTITUTIONAL FACTORS;  
PLANNING

AVAILABILITY: NTIS

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Vaaler, L.E.; Broome, E.W.

Battelle Columbus Laboratories

ADDRESS: Columbus, OH

TITLE: Mathematical Model for the Design of Grids  
for Electric Vehicle BatteriesPaper No. 780221, presented at the Society of  
Automotive Engineers' Congress and  
Exposition, Cobo Hall, Detroit, Michigan,  
February 27 - March 3, 1978, 12 p.

1978

KEYWORDS: ELECTRIC VEHICLES; LEAD-ACID BATTERIES;  
MODELS; PERFORMANCE; DESIGN; TABLES (DATA)AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096 \$2.50

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Urban Consortium for Technology Initiatives,  
Transportation Task Force; Public Technology  
Inc.ADDRESS: PTI, 1140 Connecticut Ave., NW,  
Washington, DC 20036

TITLE: Alternative Work Schedules

Information Bulletin, 25 p.

1978, February

SPONSOR: U.S. Dept. of Transportation

KEYWORDS: SCHEDULING; COMMUTING; WORK; WORKING  
CONDITIONS; RESEARCH; DEMONSTRATION;  
DIRECTORIES; TRAFFIC; TRANSPORTATION

AVAILABILITY: NTIS

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Van Abkoude, J.C.

McDonnell Douglas Corp., Douglas Aircraft Co.

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 AnalysesReport No. W77-23073, NASA CR-137924, NDC J7340,  
375 p.

1976, June

SPONSOR: National Aeronautics and Space  
Administration, Ames Research CenterKEYWORDS: BENEFIT COST ANALYSIS; ENERGY  
CONSUMPTION; ENERGY CONSERVATION; AIR  
TRANSPORTATION; PASSENGER TRANSPORTATION;  
ECONOMIC ANALYSIS; OPERATING COSTS; MARKET;  
TABLES (DATA); GRAPHS (CHARTS); DESIGN; FUEL  
CONSUMPTION; COMPARATIVE EVALUATIONS; PROFITS

AVAILABILITY: NTIS

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Urban Consortium for Technology Initiatives,  
Transportation Task Force; Public Technology  
Inc.ADDRESS: PTI, 1140 Connecticut Ave. NW,  
Washington, DC 20036

TITLE: Asphalt Improvements

Information Bulletin, 29 p.

1976, October

SPONSOR: U.S. Dept. of Transportation

KEYWORDS: HIGHWAYS; CONSTRUCTION; ASPHALTS;  
CONCRETES; RECYCLING; ADDITIVES

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van Giesse, R.; Reinink, P.

H.V. Philips' Gloeilampenfabrieken

ADDRESS: Germany

TITLE: Design of the 4-215 D.A. Automotive  
Stirling EnginePaper No. 770082, presented at the Society of  
Automotive Engineers' International  
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Hall, Detroit, Michigan, February 28-March 4,  
1977, 16 p.

1977

SPONSOR: Society of Automotive Engineers

KEYWORDS: STIRLING ENGINES; PERFORMANCE; FUEL  
ECONOMY; DESIGN; DIAGRAMS; GRAPHS (CHARTS);  
PHOTOGRAPHSAVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
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Urban Transportation Systems Associates Inc.

TITLE: Traffic Count Program. Volume I: Design  
and Development. Volume II: Program  
Documentation

1977, April

SPONSOR: Rhode Island Dept. of Transportation,  
Planning Division; U.S. Dept. of  
Transportation, Federal Highway AdministrationKEYWORDS: TRAFFIC COUNT; VEHICLE MILES TRAVELED;  
AUTOMOBILE OCCUPANCY; SEASONAL VARIATIONS;  
TRUCKS; WEIGHT; AUTOMOBILES; RHODE ISLAND;  
MEASURING INSTRUMENTS; COMPUTER PROGRAMS;  
HIGHWAYSAVAILABILITY: Rhode Island Dept. of  
Transportation, Planning Division, State

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Velson, V.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)

61 p.

1975, April

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KEYWORDS: URBAN AREAS; GROWTH; TRAVEL; URBAN TRANSPORTATION; PLANNING; TRANSPORTATION SYSTEMS

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Veziroglu, T.W. (ed.)  
Miami, University of, School of Engineering and Environmental Design; Miami University, Clean Energy Research Institute; International Association for Hydrogen Energy  
ADDRESS: 40, Coral Gables, FL 33124  
TITLE: First World Hydrogen Energy Conference. Volumes I - III

Proceedings of conference held March 1-3, 1976, Miami Beach, Florida, v.p.

1976

SPONSOR: Energy Research and Development Administration; Miami, University of, School of Continuing Studies

KEYWORDS: HYDROGEN; CONFERENCES; HYDROGEN PRODUCTION; NUCLEAR ENERGY; SOLAR ENERGY; COAL; THERMOCHEMICAL PROCESSES; GRAPHS (CHARTS); ELECTROLYSIS; TRANSMISSION; HYDROGEN STORAGE; VEHICLES; ALTERNATE FUELS; TRANSPORTATION; HYDRIDES; MATERIALS; UTILIZATION; AIRCRAFT; AUTOMOBILES; INDUSTRIAL SECTOR; RESIDENTIAL SECTOR; COMMERCIAL SECTOR; ECONOMICS

AVAILABILITY: School of Continuing Studies, P.O. Box 248005, University of Miami, Coral Gables, FL 33124 \$75.00 (while the supply lasts)

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Voltz, S.R.; Wise, J.-J.  
Mobil Research and Development Corp.  
ADDRESS: Paulsboro, NJ 08066  
TITLE: Development Studies on Conversion of Methanol and Related Oxygenates to Gasoline

Final Report, Report No. FE-1773-25, 336 p. 1976, November

SPONSOR: Energy Research and Development Administration

KEYWORDS: METHANOL; GASOLINE; CONVERSION; ECONOMICS; TECHNOLOGY; FLUIDIZED BED PROCESSES; TABLES (DATA); GRAPHS (CHARTS); ALTERNATE FUELS; SYNTHETIC FUELS

AVAILABILITY: NTIS

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Voorhees (Alan M.) and Associates Inc.  
ADDRESS: McLean, VA 22101  
TITLE: Factors and Trends in Trip Length

National Cooperative Highway Research Program Report #8, NCHRP Publication 1582, 70 p. 1968

SPONSOR: American Association of State Highway Officials; U.S. Bureau of Public Roads; National Academy of Sciences, National Research Council, Highway Research Board

KEYWORDS: VEHICLE TRIPS; TRAFFIC; URBAN AREAS; LAND USE; URBAN TRANSPORTATION; TRANSPORTATION SYSTEMS; SOCIO-ECONOMIC FACTORS; PLANNING; FORECASTING; MEASUREMENT; TRAVEL; MODELS; INCOME; GRAPHS (CHARTS); TABLES (DATA); TRUCKS; COMMUTING; SHOPPING TRIPS; RECREATION; COMPUTERIZED SIMULATION; POPULATION (STATISTICS); EMPLOYMENT

AVAILABILITY: National Academy of Sciences, Highway Research Board, 2101 Constitution Ave. NW, Washington, DC 20418 \$3.20

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Voorhees (Alan M.) and Associates Inc.  
ADDRESS: 7798 Old Springhouse Rd., Westgate Research Park, McLean, VA 22101  
TITLE: Study of Future Paratransit Requirements

Report No. PB-264082, UMTA-IT-06-0104-77-2, 266 p. 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; VANPOOLS; COMPARATIVE EVALUATIONS; TABLES (DATA)

AVAILABILITY: NTIS

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Wagner, J.R.; Naughton, J.; Brooks, W.P.; Davis, R.  
Brookhaven National Laboratory, National Center for Analysis of Energy Systems  
ADDRESS: Upton, NY

TITLE: Light Duty Highway Fleets: The Potential for Alternative Technologies in Fleets Operated by Corporations and State and Local Governments

Interim Briefing, presentation will be published as "Fleet Operator Vehicles: Summer 1977 Data," Report No. BNL-50904

1978, March 3

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

KEYWORDS: AUTOMOTIVE FLEETS; MODELS; FORECASTING; MARKET; VEHICLE REGISTRATIONS; AUTOMOBILES; HYBRID ELECTRIC-POWERED VEHICLES; PURCHASING; WEIGHT; EQUIPMENT; TRUCKS; HIGHWAY TRANSPORTATION; PASSENGER TRANSPORTATION; CAPACITY; DIESEL FUELS; AUTOMOTIVE ENGINES; SIZE; TABLES (DATA)

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Wakefield, E.H.  
TITLE: The Consumer's Electric Car

136 p.

1977

KEYWORDS: ELECTRIC VEHICLES; AUTOMOBILES; DESIGN; FORECASTING; REGULATIONS; ECONOMICS; EFFICIENCY; COMPARATIVE EVALUATIONS; TECHNOLOGY; BATTERIES; OPERATION; CONTROL; DIAGRAMS; GRAPHS (CHARTS)

AVAILABILITY: Ann Arbor Science Publishers Inc., 230 Collingwood, P.O. Box 1425, Ann Arbor, MI 48106 \$9.95

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Walbridge, E.W.  
Illinois, University of, College of Engineering  
ADDRESS: Box 4348, Chicago, IL 60680  
TITLE: Per Passenger-Mile Energy Consumption and Costs for Suburban Commuter Service Diesel Trains

Report No. PB-242232, UMTA-IL-11-0006-74-1, 59 p. 1974, August

SPONSOR: U.S. Dept. of Transportation, Urban Mass Transportation Administration

KEYWORDS: ENERGY CONSUMPTION; DIESEL ENGINES; RAIL TRANSPORTATION; COMMUTING; COSTS; POLLUTION; SERVICES; AUTOMOBILES; COMPARATIVE EVALUATIONS; CHICAGO

AVAILABILITY: NTIS

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Waldnerhaug, A.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, BEA-SP 77-029, 64 p.

1977, June

KEYWORDS: INPUT-OUTPUT ANALYSIS; INDUSTRIES; DEMAND (ECONOMICS); SUPPLY (ECONOMICS); PRODUCTION; SALES; PRICES; INVENTORIES; COSTS; CONSUMERS; STATISTICS; TABLES (DATA); INDUSTRIAL SECTOR; COMMERCIAL SECTOR; RESIDENTIAL SECTOR; IMPORTS; TRANSPORTATION

AVAILABILITY: NTIS

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Walker, D.L.; Boord, J.O.; Pigott, J.S.; Sutton, E.P.

Champion Spark Plug Co.

TITLE: How Passenger Car Maintenance Affects Fuel Economy and Emissions

Paper No. 780032, presented at the Society of Automotive Engineers' Congress and Exposition, Cobo Hall, Detroit, Michigan, February 27 - March 3, 1978, 12 p.

1978

KEYWORDS: FUEL ECONOMY; MAINTENANCE; AUTOMOTIVE EMISSIONS; AUTOMOBILES; REPAIR; AUTOMOBILE DRIVERS; TESTING; FUEL CONSUMPTION; AUTOMOTIVE ENGINES; MILEAGE; GRAPHS (CHARTS)

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

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Walz, A.

Scitran

ADDRESS: Box 5456, Santa Barbara, CA 93108

TITLE: Contribution to the Theory of the Electric Vehicle

Report No. N76-15376, NASA TT-P-16817, 33 p.; translated from Elektrotechnische Zeitschrift Ausgabe, 94(11), 622-631

1975, December

KEYWORDS: ELECTRIC VEHICLES; MATHEMATICS; BATTERIES; MECHANICS

AVAILABILITY: NTIS

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Ward's Communications Inc

ADDRESS: 28 West Adams, Detroit, MI 48226

TITLE: Ward's Automotive Yearbook: 1978

Fortieth Edition, 126 p.

1978

KEYWORDS: AUTOMOTIVE INDUSTRY; INTERNATIONAL TRADE; RECREATION VEHICLES; DIRECTORIES; VEHICLES; MATERIALS; PRODUCTION; SALES; TIRES; CANADA; AUTOMOBILES; MANUFACTURERS; TRUCKS; CONSTRUCTION; EQUIPMENT; AGRICULTURAL EQUIPMENT; INFORMATION; VEHICLE REGISTRATIONS

AVAILABILITY: \$35.00

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Warner, P.

Ogle (David) Ltd.

ADDRESS: United Kingdom

TITLE: A Purpose-Built Electric Taxi

Paper No. 760124 presented at the Automotive Engineering Congress and Exposition, Detroit, Michigan, February 23-27, 1976, 5 p.

SPONSOR: Society of Automotive Engineers

KEYWORDS: ELECTRIC VEHICLES; TAXICABS; DESIGN

AVAILABILITY: Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale, PA 15096 \$2.75

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Watts, W.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

Report No. ANL-74-XX-5, 51 p.

1974, July

SPONSOR: Energy Research and Development Administration

KEYWORDS: BIBLIOGRAPHIES; ENERGY CONSUMPTION; AUTOMOBILES; MASS TRANSPORTATION; RAIL TRANSPORTATION; BENEFIT COST ANALYSIS; DECISION MAKING; LAND USE; TRANSPORTATION SYSTEMS; PLANNING; FUEL CONSUMPTION; LOCAL GOVERNMENT

AVAILABILITY: NTIS

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Webster, W.H. (ed.)

U.S. Dept. of Energy, Assistant Secretary for Energy Technology, Division of Energy Storage Systems

ADDRESS: Washington, DC

TITLE: Battery and Electrochemical Systems Program Summary: FY 1977

Report No. DOE/ET-0014, v.p.

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KEYWORDS: ENERGY STORAGE; BATTERIES; FUNDING; RESEARCH PROGRAMS; UTILIZATION; ELECTROCHEMICAL CELLS

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Weigel, W.

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ADDRESS: Box 5456, Santa Barbara, CA 93108

TITLE: Driving Cycles for Electric Urban Vehicles and Methods for Obtaining Them

Report No. N76-15375, NASA TT-P-16822, 16 p.;

translated from Elektrotechnische Zeitschrift Ausgabe, 94(3), 142-146

1975, December

KEYWORDS: ELECTRIC VEHICLES; SIMULATION; TABLES (DATA); URBAN TRANSPORTATION; TESTING

AVAILABILITY: NTIS

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Weimer, 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; STEELS; FUEL ECONOMY; CORROSION; PROCESSING; MANUFACTURING; ALUMINUM



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Weiner, E.  
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 1974 National  
Transportation Study  
9 p.  
1975, January  
KEYWORDS: TRANSPORTATION SYSTEMS; SURVEYS; URBAN  
AREAS; PLANNING; CAPITAL COSTS; HIGHWAYS;  
PUBLIC TRANSPORTATION; REVENUE; URBAN  
TRANSPORTATION; OPERATING COSTS

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Weiner, E.; 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 Urbanized Area Journey to Work  
Statistics  
1974, May 5  
KEYWORDS: URBAN AREAS; COMMUTING; VEHICLE TRIPS;  
TRANSPORTATION; TABLES (DATA); PASSENGER  
TRANSPORTATION; POPULATION (STATISTICS);  
REGIONAL ANALYSIS; STATE ANALYSIS

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Wheeler, P.K.  
U.S. Congress, Congressional Budget Office,  
Natural Resources and Commerce Division  
ADDRESS: Washington, DC  
TITLE: Railroad Reorganization: Congressional  
Action and Federal Expenditures Related to  
the Final System Plan of the U.S. Railway  
Association  
Background Paper No. 2, 58 p.  
1976, January 15  
KEYWORDS: RAIL TRANSPORTATION; GOVERNMENT  
POLICIES; EXPENDITURES; BUDGETS; PLANNING;  
FUNDING; ECONOMICS; LEGISLATION  
AVAILABILITY: GPO \$1.60

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White, K.E.  
Exxon Enterprises Inc.  
TITLE: A Digital Computer Program for Simulating  
Electric Vehicle Performance  
Paper No. 780216, presented at the Society of  
Automotive Engineers' Congress and  
Exposition, Cobo Hall, Detroit, Michigan,  
February 27 - March 3, 1978, 16 p.  
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KEYWORDS: ELECTRIC VEHICLES; COMPUTERIZED  
SIMULATION; COMPUTER PROGRAMS; MODELS;  
DESIGN; AUTOMOTIVE CONTROL SYSTEMS;  
PERFORMANCE; BATTERIES; DRIVING CYCLE; GRAPHS  
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AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
15096 \$2.50

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White, S.B.; Clayton, C.A.; Bressler, L.D.;  
Stewart, J.R.

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Research Triangle Institute; North Carolina,  
University of, Highway Safety Research Center  
ADDRESS: RTI, P.O. Box 12194, Research Triangle  
Park, NC 27709  
TITLE: Improved Exposure Measurements

Report No. RTI 2520-760, v.p.  
1975, September 30  
SPONSOR: U.S. Dept. of Transportation, National  
Highway Traffic Safety Administration  
KEYWORDS: VEHICLE MILES TRAVELED; ACCIDENTS;  
SAFETY; AUTOMOBILE DRIVERS; RISKS; HIGHWAYS;  
NORTH CAROLINA; URBAN AREAS; RURAL AREAS;  
TABLES (DATA); POPULATION (STATISTICS); AGE  
GROUPS; OWNERSHIP; VEHICLE REGISTRATIONS;  
QUESTIONNAIRES; SEX; STATE ANALYSIS

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Wilburn, M.C. (ed.)  
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 54th 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

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Williams, G.P., Jr.  
Princeton University, Transportation Program  
ADDRESS: Princeton, NJ 08540  
TITLE: Energy Costs of Heavy Rail Transit  
Construction  
Masters Thesis, 76 p.  
1978, June  
KEYWORDS: BAY AREA RAPID TRANSIT SYSTEM;  
CONSTRUCTION; INPUT-OUTPUT ANALYSIS; SYSTEMS  
ANALYSIS; ENERGY CONSUMPTION; COSTS; TABLES  
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Williams, K.R.  
Shell International Petroleum Co. Ltd.  
ADDRESS: United Kingdom  
TITLE: Energy Analysis and the Electric Car  
Paper No. 760120 presented at the Automotive  
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Michigan, February 23-27, 1976, 5 p.  
1976  
SPONSOR: Society of Automotive Engineers  
KEYWORDS: TABLES (DATA); ELECTRIC VEHICLES;  
BATTERIES; FUEL CELLS; GASOLINE; ENGINES;  
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EVALUATIONS; INTERNAL COMBUSTION ENGINES  
AVAILABILITY: Society of Automotive Engineers  
Inc., 400 Commonwealth Drive, Warrendale, PA  
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Williams, L.J.  
National Aeronautics and Space Administration,  
Amen Research Center  
ADDRESS: Moffett Field, CA 94035  
TITLE: Air Transportation Energy Efficiency



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SPONSOR: Energy Research and Development Administration

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Wilson, C.L.

Massachusetts Institute of Technology, Workshop on Alternative Energy Strategies (WAES)

ADDRESS: Cambridge, MA 02139

TITLE: Energy: Global Prospects 1985-2000

Report of the Workshop on Alternative Energy Strategies (WAES), 291 p.

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SPONSOR: 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; SUPPLY (ECONOMICS); DEMAND (ECONOMICS); GRAPHS (CHARTS); ENERGY BALANCE; INTERNATIONAL ANALYSIS

AVAILABILITY: McGraw-Hill Book Co., New York, NY

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Wilson, D.G.

TITLE: Alternative Automobile Engines

Scientific American, 239(1), 39-49

1978, July

KEYWORDS: ENGINES; DIAGRAMS; DIESEL ENGINES; SPARK IGNITION ENGINES; RANKINE CYCLE ENGINES; STIRLING ENGINES; BRAYTON CYCLE; COMPARATIVE EVALUATIONS; GAS TURBINE ENGINES; ELECTRIC VEHICLES; EFFICIENCY; AUTOMOTIVE EMISSIONS; COSTS; STRATIFIED CHARGE ENGINES; MANUFACTURING

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Winfrey, R.; Howell, P.D.; Kent, P.H.

U.S. Dept. of Transportation, Federal Highway Administration, Offices 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

Report No. PB-271365, PHVA-RD-76-138, 159 p.

1976, December

KEYWORDS: TRUCKS; HIGHWAY TRANSPORTATION; WEIGHT; CLASSIFICATIONS; TABLES (DATA); FUELS; TRAFFIC

AVAILABILITY: NTIS

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Withrow, J.D., Jr.; Franceschini, J.P.

Chrysler Corp.

ADDRESS: Detroit, MI

TITLE: Engines for Tomorrow's Passenger Cars

Paper No. 760610, presented at the Society of Automotive Engineers' West Coast Meeting, San

Francisco, California, August 9-12, 1976, 9 p. 1976

SPONSOR: Society of Automotive Engineers

KEYWORDS: ENGINES; POLLUTION CONTROL; FUEL ECONOMY; COMPARATIVE EVALUATIONS; SPARK IGNITION ENGINES; STIRLING ENGINES; DIESEL ENGINES; WANKEL ENGINES; RANKINE 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

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Wolfe, A.C.

Michigan, University of, Highway Safety Research Institute

ADDRESS: Ann Arbor, MI 48109

TITLE: Annotated Bibliography on Highway Travel Exposure Research Methods

Report No. PB-279862, DOT-HS-803295, Interim Report, 53 p.

1978, January

SPONSOR: U.S. Dept. 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

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Wosach, J.P.

Massachusetts Institute of Technology, Center for Transportation Studies

ADDRESS: 77 Massachusetts Ave., Cambridge, MA 02139

TITLE: Regulating and Insuring Pre-Arranged Ride Sharing

Report No. PB-269574, DOT-TST-76T-33, 58 p.

1976, September 30

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

KEYWORDS: CARPOOLING; VANPOOLS; BUSES (VEHICLES); REGULATIONS; PASSENGER TRANSPORTATION; PARATRANSIT; SURVEYS; URBAN TRANSPORTATION; INSURANCE; OWNERSHIP; STATE ANALYSIS

AVAILABILITY: NTIS

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Wouk, V.

Petro-Electric Motors Ltd.

TITLE: An Experimental ICE/Battery-Electric Hybrid with Low Emissions and Low Fuel Consumption Capability

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1976

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

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 Yunker, K.R.; Sinha, K.C.  
 Southeastern Wisconsin Regional Planning  
 Commission; Purdue University, School of  
 Engineering  
 ADDRESS: SWRPC, Waukesha, WI; PU, Lafayette, IN  
 TITLE: Energy Considerations in Urban  
 Transportation Planning

Traffic Quarterly, 29, 571-592  
 1975, October  
 KEYWORDS: URBAN TRANSPORTATION; FUEL CONSUMPTION;  
 PETROLEUM; ENERGY SUPPLIES; ENERGY DEMAND;  
 ENERGY SHORTAGES; VEHICLE MILES TRAVELED;  
 VEHICLES; EFFICIENCY; AUTOMOBILES; BUSES  
 (VEHICLES); RAIL TRANSPORTATION; VEHICLE  
 TRIPS; TABLES (DATA); AUTOMOBILE OCCUPANCY;  
 PLANNING; GRAPHS (CHARTS); MODELS

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 Zahavi, Y.  
 ADDRESS: 7304 Broxburn Ct., Bethesda, MD 20034  
 TITLE: The Effects of Transportation Systems on  
 the Spatial Distributions of Population and  
 Jobs

Paper presented at the Joint National Meeting of  
 the Operations Research Society and the  
 Institute of Management Science, Miami, FL,  
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