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SENSITIVITY OF THE LEISURE-RECREATIONAL INDUSTRY TO THE ENERGY CRISIS

Prepared for the
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by

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ABSTRACT

This report presents the results of a two-week study to conduct a preliminary and qualitative assessment of potential impacts of the energy shortage on the leisure-recreation (L-R) industry. The study tasks included:

- Definition and classification of the industry
- Identification of the key parameters which characterize each industry sector
- Estimation of the relative energy sensitivity of each sector.

Ten major categories of L-R activities have been selected to best classify the industry:

- Home activities
- Local non-sport activities
- Local sports
- Spectator sports
- Winter sports
- Water sports
- Camping, hunting, fishing, and other outdoor sports
- Traveling
- Resorts, second homes, and recreational vehicles
- Miscellaneous.

The industry represented by these categories accounts for between $60 billion and $125 billion of personal expenditures, of the current annual total of approximately $725 billion, and employs approximately 10 to 15 percent of the total labor force. These figures are highly variable depending on the definition of the industry.

The L-R industry is highly reliant upon private vehicles for transportation. Mass transit facilities for long distance travel are not likely to absorb significant numbers of those displaced from use of private vehicles. Shorter trips, such as those to professional sporting events, can significantly draw upon mass transit facilities.

The overall impact of the energy crisis on the industry can be expected to be progressively more severe as availability of fuel is restricted. Current uncertainty regarding fuel availability has created a transient situation which makes assessment of near-term impacts difficult.

The report presents quantitative data and qualitative arguments in support of the following observations:

- Shifts towards regionalization of L-R activities are likely to occur

- Substitution of one leisure activity for another at lesser distance from home is likely to occur, but it is not now possible to project the extent of these substitution effects or their impact

- Those segments of the L-R industry most likely to be adversely impacted by energy shortages include:

  - Ski operations and manufacturing
  - Boat operations and manufacturing
  - Travel service operations
  - Recreational vehicle manufacturing.

Data requirements for more quantitative economic assessment of the potential impacts on the L-R industry are identified in the report.

I. INTRODUCTION

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1. PURPOSE OF THE STUDY

Concern exists that the energy crisis, particularly restrictions on the use of energy in transportation, will adversely affect revenues and employment in the leisure and recreation (L-R) industry. The purpose of this study is to provide a preliminary description of the L-R industry and an assessment of the possible impacts of energy shortages and energy conservation and allocation measures on the industry. In view of the brief period specified for the study, the approach adopted was to describe the L-R industry by sector and region, and to estimate possible industry sensitivities to alternative energy conservation measures.

2. AN OVERVIEW OF THE REPORT

The L-R industry is highly fragmented and not well defined. This report presents an initial effort to:

- Define the L-R industry and classify its components for economic analysis
- Identify key parameters which influence the energy sensitivity of the industry and which characterize it
- Assess the nature and reliability of data which are available to examine the impact of energy shortages and conservation policies.

The report also presents a series of observations concerning the sensitivity of selected L-R industries and regions to current fuel distribution programs, as well as an indication of the confidence one can place in the observations, given the data quality.

The report is organized in four sections as follows:

- A system for defining and classifying the L-R industry
- A review of the data sources used in the analysis
- The basic parameters which characterize the industry and define its sensitivity to shortages of fuel
- Principal observations which have emerged from the study effort.

II. THE DEFINITION AND CLASSIFICATION OF THE LEISURE-RECREATION INDUSTRY

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The L-R industry is defined for the purposes of this study as all firms and organizations providing goods and services to individuals engaged in leisure and recreational activities. There are three important exclusions from this definition:

- Goods and services provided to individuals traveling for business purposes
- Goods and services provided by the oil industry
- Services provided by mass carriers.

Though business travel is an important source of revenue to many L-R service industries, it is an activity which is distinct from leisure and recreational activities and may be affected differently by energy conservation measures. The impact of the energy shortage on the oil industry has been viewed as a problem apart from the impact on the L-R industry. Some service stations will undoubtedly be affected adversely by any reductions in tourist traffic, but this effect is difficult to disentangle from the effect of net supply reduction without conducting detailed regional investigations. Mass carriers (air, rail, bus) are affected by changes in leisure travel patterns, but it has not been possible in this study to make any quantitative projection of shifts in modal distribution.

The L-R industry is complex and not always distinguishable from other segments of the economy. For example, the manufacture of L-R goods is only part of the business of many firms. The service elements of the industry often cater to business activities as well as to strictly L-R activities. As a result, it is difficult to isolate the L-R industry and examine it independently.

Ten major categories of leisure-recreation activities have been identified. Table 1 lists these categories and specifies representative activities in each. Activities pursued in the home and in the local community have been included in this classification system because

Table 1
Categorization of Leisure-Recreation Activities

Home Activities	Local Non-Sport Activities	Local Sports Activities	Spectator Sports	Winter Sports
• Arts and Crafts • Hobbies (Coin and Stamp Collecting, Model Railroading) • Radio and TV • Reading • Cards • Gardening • Photography • Musical Instruments • Personal Development • Sewing • Pets	• Cinema and Movies, Drive-in-Theaters • Sunday Driving • Plays • Museums • Parks • Dinner Theaters • Ballet • Opera • Exhibits • Zoos	• Golf • Tennis • Swimming (pools) • Gymnastics • Health Spas • Bowling • Jogging • Playground Activities • Handball • Soccer • Archery • Billiards, Pool • Horseback Riding • Dancing	• Hockey • Football • Baseball • Basketball • Soccer • Racing (Horse, Car, Dog)	• Ski (downhill, cross country, jumping) • Ice Skating (figure, racing, hockey) • Snowmobiles • Sledding, Tobogganing
Water Sports (Lakes/Ocean/ River, etc.)	**Camping, Hunting, Fishing and Other Outdoor Activities**	**Traveling**	**Resorts, Second Homes and Recreation Vehicles**	**Miscellaneous Activities**
• Scuba Diving • Boating (power, sail, canoes, row) • Water Skiing • Surfing • Swimming	• Camping • Camps (Boy and Girl Scouts) • Hunting • Fishing • Back Packing • Spelunking • Mountain Climbing • Hiking • Parks	• Within U.S. - Sightseeing • Urban • Rural - Excursion Trips • Outside U.S. - Ocean Cruises - Foreign Excursions • Tours • Privately Organized	• Resorts - Beach Hotels (northern, southern) - Lodges - Cabins - Lake and Mountain Hotels - Ranches • Second Homes - Cabins - Cottages - Condominiums • Recreation Vehicles	• Aviation - Light Aircraft - Soaring - Sky Diving • Hot Air Ballooning • Clubs - Boys Club - YWCA - YMCA - Church Groups, PTA, etc. - Country Clubs - Fraternal Organizations - Women's Clubs - Scouting, Boy and Girl - VFW, American Legion • Other

they occupy a large portion of the average individual's available L-R time (refer to Chapter IV) and because they are likely to be significant beneficiaries of any decrease in the time spent on other activities. Some overlap among the major categories cannot be avoided. Though parks have been included under only one category, other activities listed can take place in parks, so some overlap is introduced. Similarly, recreational vehicles can be used in conjunction with a number of different activities. Many of the activities listed can be pursued as part of a touring vacation or at a destination resort. It is virtually impossible to eliminate such overlaps from an L-R classification system, and, in fact, an important application of such a system is to aid in understanding the interactions between L-R activities.

In each of the ten activity categories, three types of L-R industries are included:

- Service operations
- Manufacturing operations
- Related support operations.

For example, in the case of skiing, ski resorts, ski equipment manufacturers (including manufacturers of skis, clothing, accessories, and lifts), retail shops, and additional support facilities in the community around the resort are included.

The 1972 Standard Industrial Classification (SIC) code of the Department of Commerce does not establish a clear definition of the L-R industry, and it is impossible to correlate census data collected by SIC with the L-R industry breakdown given in Table 1. If SIC data could be further divided in such a way that the current standard economic reporting procedure would allow systematic reporting of the L-R industry, such data would be of great value for analyses such as these.

III. DATA SOURCES AND QUALITY

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A variety of data sources were used in developing information for this report:*

- Statistical Data Compiled by Federal Agencies
  - Department of Commerce (Bureau of Census)
  - Department of the Interior (Bureau of Outdoor Recreation, National Park Service)
  - Department of Transportation
- Reports prepared by
  - Federal agencies
  - Brokerage houses
  - Business school libraries
  - Industry associations
  - State and regional agencies
- Magazine and newspaper articles
- Telephone and personal interviews
  - With L-R industry representatives
  - With state and federal government officials

A significant percentage of the information used in the analysis was obtained directly from L-R industry representatives or from materials prepared by industry associations. No independent survey research or direct empirical confirmation of reported data was possible during the brief period in which the study was conducted. The data were accepted as presented.

Four fundamental points should be made about the nature and quality of the data used in this study:

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* Specific references are listed in a bibliography attached to this report.

Completeness: A major effort was made to locate and use every pertinent source of data in the time available. However, some significant data sources may not have been identified. In addition there are certain types of data which could not be obtained for all L-R activities considered, including:

- Participation hours/days for each L-R activity
- Transportation mode used and distribution of miles traveled to participate in each activity
- Regional distribution of firms and activity participation
- L-R manufacturers' sales by activity and region.

Accuracy: The data used in the analysis is of mixed quality. In many cases it has not been possible to establish the accuracy of individual data, or to identify the original source. The data presented should only be considered indicative of the range in which the numerical value may lie.

Double-Counting: The L-R industry has been defined and categorized differently in virtually every data source used. As a result, it has been difficult to obtain data which can be reconciled from one source to another. Often no precise definition is given of what activities are included in a particular category, and the level of aggregation is frequently too great to permit data for a specific activity to be extracted. The most serious problem of this type has been in determining whether business travel expenditures are included and in extracting them if they are. Efforts have been made to eliminate data inconsistencies and double-counting wherever possible, but it is likely that some double-counting may remain due to problems with the data sources.

"Crisis Behavior" Effects: The economy, the L-R industry, and individual L-R participants are now in a period of adjustment to current energy conservation programs. Many individuals and firms have expressed uncertainty about future shortages and policies and have indicated that this is adversely influencing industry planning.

Some L-R firms are in a "hold mode" waiting clarification of the picture on policies and shortages. The short term response of the participants in L-R activities and the consequent immediate impacts on the industry may thus be misleading about longer term "normalized" behavior. Once the conservation measures have been in effect for some time and individuals have had an opportunity to develop accommodations and alternatives, the picture may become substantially clearer and the conclusions may change.

For these reasons, the analysis and observations in this report should not be isolated from the discussion in which they are presented.

IV. PARAMETERS OF THE PROBLEM

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The following basic parameters have been identified which characterize the L-R industry and its interface with the energy industry:

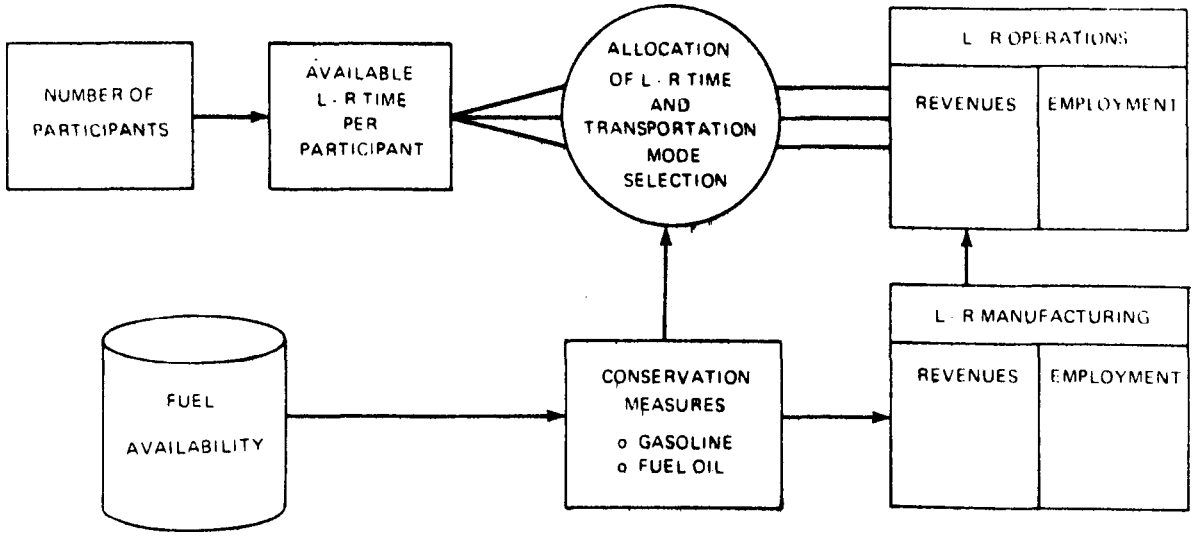
- Leisure time availability
  - Total time
  - Distribution among L-R activities
- Economic magnitude of the L-R industry, nationally and by activity
  - Revenues
  - Taxes
  - Employment
- Transportation interface
  - Modes used to pursue L-R activities
  - Distance travelled to activities
- Geographic distribution of L-R activities
- Energy requirements of L-R activities
- Energy conservation measures
  - Parametric effect on L-R transportation
  - Individual response

This chapter presents the results of the analysis concerning the first three of the above parameters, and indicates where additional efforts are needed to develop further quantitative information. The last three parameters listed above are discussed in the following chapter with respect to specific sectors of the industry.

The system diagram shown in Figure 1 provides a framework for describing these parameters.

FIGURE 1

System Diagram Describing Impact Analysis



This figure indicates the basic elements of the problem. Each potential L-R participant has a certain amount of L-R time available during the year which is allocated among a number of different activities. Participation in each activity may or may not require transportation and the expenditure of some money. These expenditures generate revenue for the L-R service and manufacturing industries. A substantial portion of the effort in this study has been devoted to establishing the following baseline data for the parameters indicated in Figure 1:

- Amount of leisure time available and how that time is divided among alternative activities
- Modes of transportation used in conjunction with L-R activities and the distance travelled
- Expenditures associated with each L-R activity.

The availability of fuel and the conservation measures adopted to allocate that fuel, affect the L-R industry in three ways:

- They constrain the use of transportation in the pursuit of L-R activities
- They restrict the availability of fuel oil (and possibly raw materials) to L-R manufacturers
- They limit the amount of fuel available to operate L-R facilities.

Although the last two effects are important, the emphasis in this study has been placed primarily on the way in which real or perceived constraints on transportation availability are likely to affect the L-R industry.

1. AVAILABILITY AND USE OF LEISURE TIME

The average individual has a large percentage of the hours during a year available for leisure activities. Table 2 summarizes some of the key findings concerning the amount of leisure time and its use. Of the hours available to each individual for leisure activity, only a small percentage is accounted

Table 2
Summary of Leisure Time Data

. Estimated Leisure Time Available Per Year	2200 - 2700 hours
. Percent of Total Time	25 - 30%
. Average Number of Leisure Hours During Annual Vacation	200 - 400 hours
. Vacation Hours as a Percent of Total Leisure Time	10 - 20%
. Percent of Leisure Time Spent in the Home	60 - 70%

for by the annual vacation. The majority of leisure hours are spent in the home and most of the remainder in the local community. The leisure hours most sensitive to energy shortages are those devoted to vacation and local/regional travel on weekends or holidays. If some of these hours are shifted into additional home or community activity, the net impact on the individual may be small; but the economic impact on the L-R industry may be significant, since per hour L-R expenditures are greatest for L-R activities conducted outside the home (see Table 3).

Some representatives of the travel and resort segments of the L-R industry have indicated that they expect a trend toward regionalization of vacation travel. This effect, if it occurs, may lead to a net shift of revenues to resort communities and recreational facilities near major urban areas.

Comprehensive information on the distribution of leisure hours spent in all L-R activities does not appear to be available. The best data identified was that in a recent Department of the Interior publication, Outdoor Recreation - A Legacy for America. This source gives leisure hours devoted to selected outdoor activities during the summer months. However, the total number of hours represented by this sample of activities is extremely small.

Although the energy crisis likely will not alter the total number of leisure hours available to the average individual, it may produce a change in the way those hours are spent. Projecting the way in which leisure hours may be transferred from one activity to another is speculative, but the sensitivity of selected activities to such shifts can be estimated (refer to Chapter V).

2. ECONOMIC MAGNITUDE OF THE L-R INDUSTRY

Estimates of the economic magnitude of the L-R industry range from $60 billion to $125 billion per year. The variation is due largely to the differences in definitions of the industry which have been used. Table 3 presents a summary of economic data which has been developed during this study. The data in the left-hand part of the table is taken primarily from two Federal Government sources:

Table 3
Estimates of 1972 Leisure Related Expenditures

Leisure-Related Expenditures / Billions of dollars / Expenditure Category	Expenditure Activity/Location					L-R Activity Category (6)									
	Home	Local	Travel[5]	Multiple[5]	Total	Home	Local Non-Sport	Local Sport	Spectator Sports	Winter Sports	Water Sports	Camping, Hunting etc.	Traveling	Resorts, Second Homes	Miscellaneous	Total
L-R Goods and Services[1]																
• Books (excluding education)	3.7				3.7											
• Magazines, Newspapers, etc	4.7				4.7											
• Radio & TV Equipment, Records	11.4				11.4											
• Radio, TV Repair	1.5				1.5											
• Flowers, Seeds, Plants	1.8				1.8											
• Non Durable Sport Supplies				7.1	7.1							1.3				1.3
• Durable Sport Supplies				6.3	6.3					0.8	4.0	1.5		2.5		8.8
Meals and Beverages[1,2,3]		28.2	5.1		33.3							0.9	5.1			6.0
Admissions[1]																
• Motion Pictures		1.2			1.2											
• Theatre, Opera, etc.		0.8			0.8											
• Spectator Sports				0.6	0.6				0.6							0.6
• Amusements				2.1	2.1							0.3	1.7			2.0
Pari Mutual Net Receipts[1]		1.2			1.2									Home Sales		
Lodging[2]			3.1		3.1					0.6		0.5	3.1	(7.2)		(11.4)
Clubs & Organizations[1]		1.2			1.2							0.1				0.1
Miscellaneous[1]				4.0	4.0					0.5		1.3	4.6			6.4
Transportation[2,4]		24.4	8.9		33.4					0.7		0.8	8.9	6.0		16.4
Totals	23.1	57.0	17.1	20.1	117.3	–	–	–	0.6	2.6	4.0	6.7	23.4	15.7	–	53.0

Notes (1) "Personal Expenditures by Type of Product", Survey of Current Business, July, 1973.

(2) 1972 Travel Expenditure Study, Summary Report, December, 1973.

(3) Local meals, includes lunches as well as evening meals.

(4) Travel Transportation from (2). L-R Transportation is reported to be 1/3 of all local transportation in Nationwide Personal Transportation Study. The transportation data given in (1) was multiplied by this fraction to give the local L-R contribution.

(5) Reference (2) indicates that L-R travel accounts for $23.4 B, including incidental expenditures.

(6) Categories as in Table 1. The totals in this part of the table do not include home or local expenditures. Durable sports supplies exceed those recorded in (1); all other expenditure items are consitent with the results on the left of the table.

- Survey of Current Business, U. S. Department of Commerce

- 1972 Travel Expenditure Study, U. S. Department of Transportation

The expenditure categories used in these sources do not correspond to the L-R categories presented earlier in this report, and no information is given concerning the type of L-R activity to which the expenditure is related. The assignment of leisure categories in the table to the home-local-travel markets is intended to provide an indication of the possible distribution of expenditures.

The data given in Table 3 indicate that the leisure-recreation industry, as defined in this report, accounted for over $100 billion of personal expenditure in 1972. The estimate given should not, however, be treated as more than an indication of the industry's magnitude, because of several data deficiencies, including:

- Data on expenditures for second homes is not included

- Expenditures for local meals include lunches, which are not strictly a L-R activity

- The local L-R transportation expenditure is an estimate based on national statistics giving the percentage of local driving mileage devoted to L-R activities.

Of greater relevance to this study than the total magnitude of the industry is the distribution of L-R expenditures:

- Activities conducted in the home and the local community account for a large percentage of L-R expenditures

- A significant percentage of the expenditures at restaurants and hotels, nationally, is from L-R travel

- Estimates of total expenditures on leisure travel range from $24 billion to over $40 billion per year. Although these estimates include activities which have been classified separately from travel in this study (and therefore may be too high) it is clear that travel accounts for a significant percentage of L-R expenditures.

There are several qualitative observations that can be drawn from the information in Tables 2 and 3:

- A high proportion of the total L-R expenditure is made during the 20-30% of the total L-R hours devoted to non-home activities

- If a shift of L-R hours into home activities occurs, those segments of the industry supporting travel related activities are likely to suffer severe revenue and employment impacts

- A reduction in travel dollars would likely not result in a corresponding increase in home dollars. A reduction in total L-R dollars might result.

The right hand side of Table 3 presents data on expenditures in specific segments of the L-R industry. This data is extracted from more comprehensive industry descriptions presented in Chapter V. It is displayed in Table 3 to demonstrate the consistency between the national data and that obtained from industry sector analysis. Additional study effort should be devoted to completing the expenditures matrix presented here and to refining the data to achieve complete internal consistency.

No authoritative estimates of employment in the L-R industry have been identified. Data from the Statistical Abstracts of the United States for 1973 indicates that about 730,000 individuals are employed in the hotel and motel industry. Comparable estimates for other industries are presented in Chapter V. A gross estimate of total employment in the L-R industry can be obtained using the following approach:

- Total personal consumption expenditures (1972) = 7.26×10^{11} dollars

- Labor force employed in the private sector (1972) = 59.5×10^6
- PCE contribution per employed person = 1.2×10^4 dollars
- Total L-R expenditures (1972) = 60 to 120×10^9 dollars
- Estimated L-R employment = 7 to 10×10^6

This estimate that 7 to 10 million people are employed in the L-R industry is based on the assumption that each person employed in the L-R industry generates revenue at the same rate as the average employee in the economy as a whole. Since the L-R industry is labor intensive, it is likely that this employment estimate is low. Because of the large employment levels in the industry, a relatively small decrease in L-R revenues could have a significant impact on national unemployment.

3. THE TRANSPORTATION INTERFACE

The automobile is by far the most common mode of transportation used in conjunction with L-R activities. Data from the 1972 National Transportation Survey indicates that in nearly every state, 80-95 percent of all visitors arrive by automobile. Figure 2 presents a profile of the modal split for three types of vacation trips over 100 miles; 91.3% of those trips are made by automobile.*

Estimates based on average load factors for the scheduled airlines during 1971, 1972 and 1973 (approximately 50% in all these years) and assuming

- No flight reductions
- All available seats are used for L-R trips
- All destination requirements match schedules,

indicate that the airlines can absorb only 8% at maximum of the historical L-R person-trips made by automobile on trips longer than 100 miles. Since load factors on popular vacation routes

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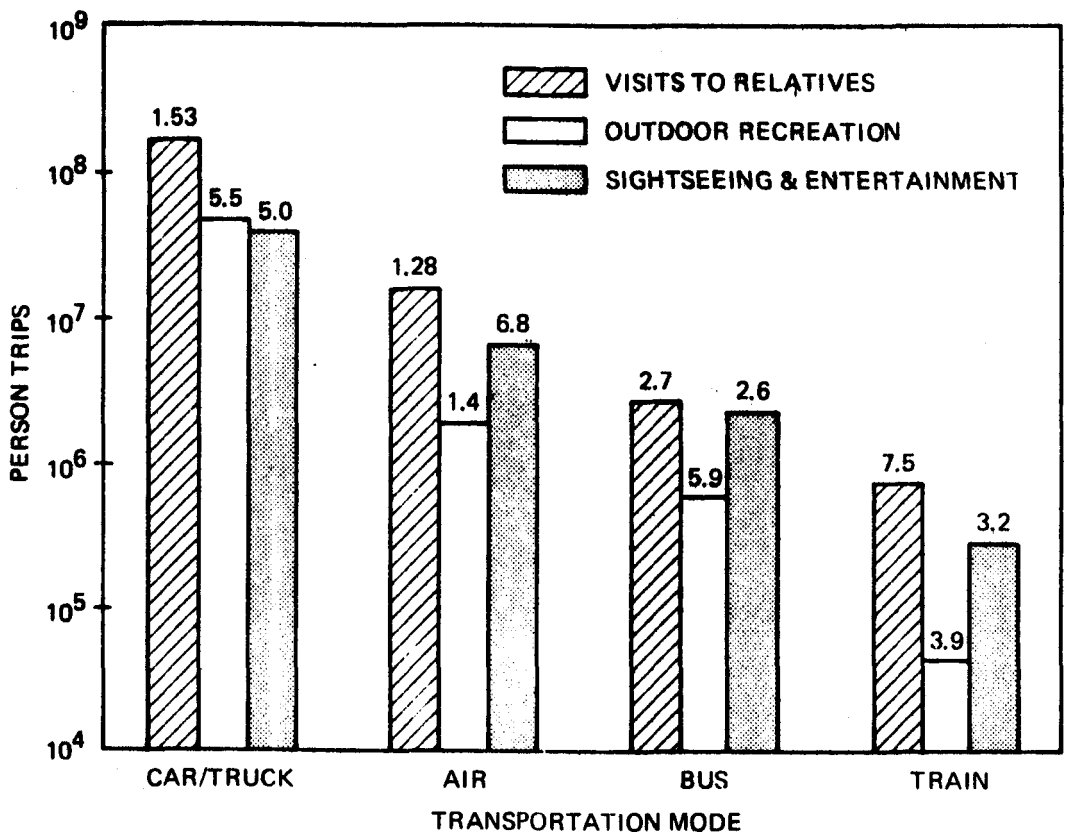
* Only 2/3 of the visitors to California and Arizona travelled by car, the rest using air and rail. Alaska and Hawaii rely heavily on air travel but even in Alaska over half the visitors arrive by car.

FIGURE 2
Modal Distribution of L-R Trips
Over 100 Miles



Source: 1972 National Transportation Survey

are far greater than the average and since scheduled flights do not serve many of the destinations required for visiting and outdoor recreation, it is estimated that airlines can at most absorb passengers from a 2 to 5% reduction in auto travel. Other mass modes (bus and rail) do not have sufficient equipment to absorb a significant percentage of the automobile person-trips. Consequently, if energy conservation measures restrict the use of automobiles in trips over 100 miles, a net reduction in the amount of travel is inevitable.

Despite its importance as a principal mode of conveyance in L-R activities involving travel over 100 miles, the automobile is not used principally for leisure purposes. As indicated in Tables 4 and 5,

- Only 1/3 of all driving is L-R related
- Only 10% of L-R driving is devoted to vacation trips.

Since the average car is driven approximately 12,000 miles in a year, it follows that the typical vacation trip is only about 400 miles (round trip). Data gathered by the Department of the Interior* indicate, on the other hand, that vacation trips devoted to outdoor recreation involve average roundtrip mileage in excess of 2,000 miles. These figures imply that there is a strong variation in the distance travelled to participate in different types of L-R activities. Two types of data which do not appear to be available are required to pursue the analyses of the impact of fuel shortages on the L-R industry:

- Average mileage driven to participate in each L-R activity per person-trip

- Average expenditure per person-trip for each activity

4. GENERAL OBSERVATIONS

There are a number of general observations which can be made based on inferences drawn from the data presented in this chapter. These observations are of value in thinking about potential impacts of the energy shortage on the L-R industry but are not in themselves impact assessments.

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* Outdoor Recreation - A Legacy for America, December, 1973.

Table 4
Automobile Travel by Purpose

Purpose of Trip	Percent of Total Vehicle Mass
Work Related	40.6
Family Business	20.0
Educational, Civic, Religious	4.9
Leisure	33.3
Other	1.2

Source: Nationwide Personal Transportation Study, Report 3

Table 5
Automobile Leisure Travel by Purpose

Leisure Activity	Percent of Total Leisure Related Vehicle Miles
Vacation	10
Visiting Friends and Relatives	36
Pleasure Rides	9
Other Social and Recreational Travel	45

Source: Nationwide Personal Transportation Study, Report 3

Local visits: A large percentage of all L-R trips (54% of those over 100 miles and 36% of total L-R miles driven) are devoted to visiting friends and relatives. It is reasonable to expect that the per person-trip expenditure rate in this kind of activity is low. As a result, if such trips are curtailed due to energy shortages, the net impact on the L-R industry might be low.

Regionalization: Industry groups and individual hotel/resort operators appear to be encouraging a regionalization of L-R trips and mini-vacations at local hotels. If such shifts in participation patterns occur involving:

- Participation in the same activities but closer to home

- Changes in the relative amounts of time devoted to specific activities,

then some segments of the L-R industry may benefit and others may be adversely impacted. The precise way in which such shifts occur will depend on:

- The degree of energy shortage
- The type of conservation measures adopted.

Some tentative evidence is already available which indicates that shifts in leisure time activity are likely to occur.

Substitution effects: It is not possible to project with any accuracy the economic impact of substitution effects in the L-R industry. But from the data presented in Table 3, it appears that any substitution effects which occur are not likely to be sufficient to preserve total L-R revenues at current levels. For example, it is doubtful that expenditures on home activities could be increased enough to absorb all the expenditures currently devoted to travel.

Outdoor Recreation: The data on outdoor recreation gathered by the Department of the Interior implies that there are significant differences in the L-R energy requirements of different groups of people. It may be that those individuals who participate in outdoor sports will be severely impacted by the energy shortage while those whose only L-R travel is to make an annual trip to the shore will be virtually unaffected. There may also be significant differences in the impacts which are felt by different demographic groups. Individuals with large financial resources will have greater flexibility in finding ways to pursue their L-R activities than those with fewer resources. Two examples will illustrate the point:

- Preliminary inputs from Florida indicate that the more expensive resort hotels are experiencing growth in revenues while less elegant resorts have reported significant decreases in business

- A professional may be able to take a skiing (or boating) weekend and return on Monday morning when gasoline is available. A laborer would not have that option and would likely abandon the trip.

Data on the geographic distribution of L-R activities (including a breakdown of relative participation hours/days by region) and the energy requirements of manufacturing and service operations has not been identified. In order to obtain a partial indication about such data and to develop additional information on industry segments and specific geographic regions which were considered to be especially vulnerable to energy shortages, specific L-R categories and regions were selected for detailed analysis. Each was treated as a case study and information was gathered by contacting industry associations, representative firms, state agencies and so on. This data, in conjunction with the baseline data presented above, was used to carry out the sensitivity analysis presented in the following chapter.

V. OBSERVATIONS ON POTENTIAL IMPACTS

V. OBSERVATIONS ON POTENTIAL IMPACTS

There are four energy conservation measures which have been initiated nationwide as of mid-January 1974:

- Mandatory refinery yield control programs
- Allocation of jet fuel to commercial carriers at the level of 95 percent of 1972 consumption
- Voluntary Sunday closings of gasoline service stations
- Uniform maximum highway speed of 55 m.p.h.

There are additional measures currently being considered by the FEO and several states have initiated independent actions to conserve fuel. The primary emphasis of the programs adopted to date is to reduce the consumption of gasoline in order to insure sufficient supplies of other fuels. Recently published reserve figures indicate that the amount of gasoline available is only 5-10 percent below projected demand on a nationwide basis (regional supply shortages may be more severe). Hence, the conservation measures and the supply shortage are only resulting in minimal inconvenience to most people.

The L-R industry is most severely impacted by the Sunday closing measure, which limits the effective driving range on Sunday to 200-300 miles, assuming that tanks are filled on Saturday. As noted in Chapter IV, the typical L-R trip is substantially less than 200 miles in length, so the Sunday closing in itself should not have a severe impact on all but approximately 10 percent of L-R trips. However, the uncertainty associated with Sunday closings and the concern about being unable to fill up on Saturday for the return trip has apparently deterred a significant percentage of potential L-R participants from making trips away from the local community on weekends. Survey data is not yet available to confirm this situation but informal responses from industry representatives indicate that such reductions in trips have occurred.

Ideally, an impact analysis of both L-R industry segments and geographic regions would involve a parametric analysis of the reductions in L-R revenues and participation given alternative conservation measures. However, as noted earlier, several key data inputs required to make such a quantitative analysis are lacking:

- Projections of individual response to possible conservation measures and data on actual response to existing measures are not available

- Travel distance profiles for L-R activities are not sufficiently comprehensive to determine quantitatively which classes of activities are likely to be impacted most severely

- Expenditures on L-R activities as a function of trip length are not known directly and are difficult to deduce with any accuracy from existing data.

As a result, the impact assessments presented in the discussion which follows are based on qualitative judgments formulated by analysis of the quantitative data on the industry categories and geographic regions studied in detail.

Three broad impact categories have been used in making the assessment. Because of the judgmental nature of these assessments, the three categories can be defined only in general terms as follows:

- High potential impact: A substantial probability that revenues in either service or manufacturing operations will decrease more than could be expected due to normal economic and/or weather effects.

- Medium potential impact: Revenues are expected to be affected, but the impact can be significantly mitigated as a result of the availability of alternate transportation modes, alternate revenue sources, or other strategies to overcome energy shortage problems.

- Low potential impact: Relatively minor revenue changes which cannot be distinguished from changes due to parameters other than the energy shortage.

In assigning an impact rating, specific qualitative reasons are provided to support the judgment.

1. AN ECONOMIC OVERVIEW AND QUALITATIVE IMPACT ASSESSMENT FOR SELECTED L-R INDUSTRY CATEGORIES

Six of the ten major L-R categories presented in Chapter II were selected for detailed study. In some cases, all of the activities in the category were analyzed. In others, only those which were judged to be most vulnerable to energy shortages were considered. The results of the economic analysis and the impact assessment for these categories are presented in Table 6. This table consists of:

- A summary table comparing all industry sectors analyzed
- A separate table presenting more specific information for each sector.

However, it should be noted that virtually all of the quantitative information presented in these tables requires additional verification before it can be used in rigorous analysis.

There are a number of opportunities for certain L-R operations to take steps to counter any decreased participation trends due to fuel shortages. Several approaches have been noted by industry representatives during the data collection interviews:

- Several ski resorts have installed gasoline pumps or prevailed on local stations to remain open on Sunday to provide skiers with sufficient gasoline to return home. Other resorts may be able to pursue a similar policy. (If one-day station closing becomes mandatory, stations in resort areas might choose a day other than Sunday.)
- Commercial campgrounds have encouraged campers to leave their RV's at the campground and have provided transportation to the nearest urban center. Options to rent RV's for owners have also been discussed

Table 6
Impact Summary for Selected Leisure Industry Categories

INDUSTRY CATEGORY	REVENUES (MILLIONS OF DOLLARS)	EMPLOYMENT (THOUSAND PEOPLE)	NUMBER OF FIRMS ESTABLISHMENTS	ANNUAL PARTICIPATION (MILLIONS OF PEOPLE)	ESTIMATED FUEL CONSUMPTION (10^6 GALLONS YEAR)	POTENTIAL IMPACTS H	M	L	REMARKS
Spectator Sports	570 (admissions)		2,000 - 3,000	280 (attendance)	400			●	Opportunities for increased use of mass transit are high
Winter Sports									
• Skiing	400 (equipment) 1,600 (related)	750	1,100 (areas) 6,000 (shops)	52 (person-days)		●			Vulnerable to weekend travel restrictions
• Snowmobiles	350 (sales) 250 (operations)	37	37 (manufacturing)	3.6 (owners)	1.25			●	Fuel consumption low used near home predominantly
Water Sports									
• Boating	4,000 (sales)	200 (dealers) 150 (manufacturers)	16,500 (dealers) 1,800 (manufacturers)	9 (owners)	1,125 (outboards)	●			Vulnerable to weekend travel restrictions Fuel requirements are substantial most use requires travel
Camping, Hunting Fishing and Other Outdoor Sports									
• Camping	300 (campgrounds)	100	12,000 (campgrounds)	400 (participant days)			●		Reliance on auto; remote and weekend camping vulnerable
• Hunting, Fishing	7,000		200 (manufacturing) 28,700 (related)	36 (over age 12)			●		Travel distances often short, but most trips by auto
• Parks	86 (direct) 1,120 (related)	200,000 (including part time)	297 (Federal) 3,400 (State) 31,200 (Local)	200 (Federal) 463 (State)			●		May be a shift of activity to local parks
Travel									
• Within U.S. (over 100 miles)	23,400 (includes 4,100 for outdoor recreation)	828.5 (hotels and motels)	21,000 (hotels) 43,500 (motels)	322 (person-trips)	23,000 (auto)	●			Highly dependent on auto; much of travel is on weekends
Resorts, Second Homes and Recreational Vehicles									
• Second Homes	7,200 (sales) 5,000 (related)	550		3.5 (homes)			●		Most travel on weekends but many second homes within 100 miles
• Recreational Vehicles	2,500 (sales) 1,000 (related)	190 - 230	650 (manufacturers) 10,000 (dealers) 1,000 (suppliers)	5.2 (vehicles)	2,000	●			Fuel consumption per mile is high

PROFESSIONAL AND MAJOR COLLEGE SPECTATOR SPORTS

ECONOMIC DATA

- Annual revenues
  - Admissions $570 million
- Activity
  - Attendance (1972) 280 million
- Number of teams
  - Professional ~350
  - College 2,000 - 3,000

GEOGRAPHIC DATA

- Generally distributed by population density
- Primarily located in urban centers

ENERGY CONSUMPTION INFORMATION

- Transportation modes used to reach destination(%)
  - Auto 83.5
  - Air and Other 3.8
  - Train 2.2
  - Bus 10.5
- Estimated Consumption — Million gal/year
  - Heating and Operations 135
  - Auto consumption 260
  - Train consumption 3
  - Bus consumption 4

INDUSTRY SENSITIVITY

High _____ Medium _____ Low X

- Trips are predominantly local
- Private autos are used less than for most other activities
- Increased use of mass transit is feasible and could mitigate potential impacts

ADDITIONAL COMMENTS

- No significant indication to date of impact on attendance
- Quantitative figures require additional verification

SKIING

ECONOMIC DATA

- Annual revenues
  - Equipment sales $ 400 million
  - Other related expenditures 1.6 billion
- Employees
  - Total in all related 750,000
- Firms
  - Areas 1,100
  - Shops 6,000
- Activity size
  - Number of skiers 4 million
  - Annual skier-days 62 million
- Revenue breakdown
  - Lodging and meals 29%
  - Transportation 23%
  - Equipment 24%
  - Lift tickets 14%
  - Other 10%

GEOGRAPHIC DATA

- States with the most ski areas:

- New York	126	- Massachusetts	48
- Michigan	75	- Colorado	47
- Maine	61	- Pennsylvania	46
- California	50	- New Hampshire	43

ENERGY CONSUMPTION INFORMATION

- Transportation modes used to reach destination (%)
  - Auto 90
  - Air 5
  - Train 1
  - Bus 4
- Examples of average distances travelled (one way)

	State Residents	Out-of-State Residents
- Colorado	93	298
- Maine	165	385

INDUSTRY SENSITIVITY

High X Medium _____ Low _____

- Extremely susceptible to mandatory weekend driving restrictions
  - Approximately two thirds of skiing is on weekends
  - Approximately 90% of skiers arrive by auto
- Some ski equipment manufacturers use petro-chemical materials

ADDITIONAL COMMENTS

- Some ski areas have made agreements with local gasoline stations to remain open on weekends
- High income of skiers makes them less susceptible to gasoline price increases
- Some industry sources report sharp drops in retail ski sales; others have not reported drops due to energy shortage
- Shifts to local ski areas will be severely limited by capacity
- Quantitative figures require additional verification

BOATING

ECONOMIC DATA

- Annual revenues
  - Total retail sales — $ 4 billion
- Employees
  - Marine dealer employees — 200,000
  - Related manufacturing — 150,000
- Firms
  - Dealers — 16,500
  - Boat manufacturers — 1,800
  - Accessory manufacturers — 10,000
  - Trailer manufacturers — 100+
  - Marine engine manufacturers — 24
- Activity
  - Recreational boats — 9 million

GEOGRAPHIC DATA

- Leading states by number of manufacturers
  - Florida — 188
  - California — 167
  - Washington — 54
  - Massachusetts — 49
- Leading states by number of registered boats
  - Michigan — 534,000
  - California — 456,000
  - Texas — 373,000
  - Wisconsin — 315,000

ENERGY CONSUMPTION INFORMATION

- Estimated average travel by auto to use boat: 50 miles per week
- Estimated running time per outboard motor per year: 50 hours
- Gasoline used in outboards ≅ 1.1 billion gal/year (equivalent to .5 percent of total U.S. annual petroleum consumption)
- Large power boats may require up to several gallons of fuel per mile

INDUSTRY SENSITIVITY

High X Medium _____ Low _____

- Manufacturers vulnerable to reductions in petro-chemical availability
- Users very sensitive due to dependence on gasoline both to get to and to use their boats
- Extremely susceptible to weekend restrictions since about 75 percent of boating is on weekends

ADDITIONAL COMMENTS

- Large boats may be severely range limited
- Small boat owners who trailer boats may reduce number of trips and travel distance, where feasible
- Number of boats in use by type
  - Inboard (including auxiliary powered sailboats) — 745,000
  - Outboards — 5,530,000
  - Sailboats (without inboard power) — 740,000
  - Miscellaneous craft, many of which are used with motors — 2,420,000
- Quantitative figures require additional verification

CAMPING

ECONOMIC DATA

- Annual revenues
  - Campgrounds — $300 million
- Employees
  - Total related — 100,000
- Firms
  - Campgrounds — 12,000
- Activity
  - Participation — 35 million
  - Days — 400 million
  - Daily expenditures for family of four — $ 17.50

GEOGRAPHIC DATA

- Broadly distributed
  - 50% within 50 miles of cities greater than 50,000
  - 82% within 150 miles of cities greater than 50,000

ENERGY CONSUMPTION INFORMATION

- Most weekend camping is within radius of 125 to 300 miles

INDUSTRY SENSITIVITY

High _____ Medium X Low _____

- Almost complete reliance on private vehicles
- Remote location activity could be curtailed severely
- Weekend camping strongly impacted by Sunday closings

ADDITIONAL COMMENTS

- Industry survey of anticipated impact of energy shortage on 1974 camping plans

	August 1973	January 1974
- Not at all	60.7	29.4
- Slightly	29.7	39.0
- Seriously	7.3	25.2
- Abandoned	2.0	6.4

- Distribution of camping expenditures (%) for family of four

- Campsight	10.6	- Clothes and accessories	9.9
- Food	19.5	- Souvenirs	8.7
- Fuel & oil	23.0	- Miscellaneous	15.6
- Recreation	12.7		

- Quantitative figures require additional verification

HUNTING AND FISHING

ECONOMIC DATA	GEOGRAPHIC DATA	ENERGY CONSUMPTION INFORMATION
• Annual revenues - Total related $ 7 billion • Firms - Manufacturing 200 (minimum) - Total related enterprises 28,700 • Participation - People 36 million (Data on participation days not available)	• Percentage of participation - West North Central 31 - West South Central 30 - East South Central 27	• Approximately 95% of travel is by auto • Average miles per trip (approximate): 23 miles

INDUSTRY SENSITIVITY	ADDITIONAL COMMENTS
High _____ Medium __X__ Low _____ • Relatively short travel distances which would imply minimal impact • Remote areas could be impacted due to high percentage of auto travel • Major remote fishing resort areas could be significantly affected	• Distribution of expenditures (%) - Operations 32 - Equipment 44 - Support 24 • Overlap with boating, camping and parks is likely • Quantitative figures require additional verification

ECONOMIC DATA

- Annual revenues
  - Federal park direct — $ 15 million
  - State park direct — 71 million
  - Local park direct — 120 thousand
  - Total Federal related — 11.2 billion
- Activity
  - Overnight stays, federal — 14 million
  - Overnight stays, state — 51 million
  - Attendance, federal — 200 million
  - Attendance, state — 483 million

GEOGRAPHIC DATA

- State/local park participation is generally in proportion to population
- Most national parks and recreation areas are in Western states

ENERGY CONSUMPTION INFORMATION

- Federal park travel is 99% by auto

INDUSTRY SENSITIVITY

High _____ Medium __X__ Low _____

- Participation requires auto travel almost exclusively
- Park revenues are minimal; expenditures go primarily for accommodations and food

ADDITIONAL COMMENTS

- Park visits may shift to local parks, with an attendant reduction in expenditures for food and accommodations in vicinity of remote park areas. Use of buses may help mitigate the impact.
- Number of parks and recreation areas
  - Federal — 297
  - State — 3,425
  - Local — 31,235
- Quantitative figures require further verification

LEISURE TRAVEL (TRIPS OVER 100 MILES)

ECONOMIC DATA

- Annual revenues
  - Expenditures (by activity) (in billions)

. Visit friends and relatives	$ 10.5
. Sightseeing & entertainment	4.9
. Personal & family	3.9
. Outdoor recreation	4.1
	23.4

  - Expenditures (by function)

. Transportation	$ 8.9
. Lodging	3.1
. Food	5.1
. Entertainment	1.7
. Gifts & incidentals	4.6
	23.4

- Employees: 828,532 (in hotels and motels)
- Activity size
  - 64% of all person-trips (over 100 mi.) are for L-R
  - 63% of all person-miles (over 100 mi.) are for L-R
- Number of establishments
  - hotels: 21,000
  - motels & motor hotels: 43,500

GEOGRAPHIC DATA

- Distribution of trips by main purpose of trip (% of all trip travel)

Region of Destination	Visit Friends & Relatives	Outdoor Recreation	Sightseeing & Entertainment
- New England	30.8	15.2	12.3
- N. Y. & N. J.	30.4	7.5	10.0
- Mid-Atlantic	34.3	9.4	8.4
- South	32.7	7.1	12.0
- North Central	35.3	10.9	7.1
- Northwest	27.1	11.9	11.4
- Southwest	34.2	9.0	8.1
- Pacific	27.8	12.1	15.9
- United States	31.6	10.0	11.9

ENERGY CONSUMPTION INFORMATION

- Modal distribution for L-R trips by person-miles

- Auto/Truck	67.5
- Auto/Truck (camping)	10.4
- Bus	1.6
- Train	.6
- Air	19.0
- Other	.6

- Round trip distance distribution of L-R trips by person-miles

- 200 to 399	16.1
- 400 to 599	12.9
- 600 to 799	8.8
- 800 to 999	6.2
- 1,000 to 1,999	18.8
- 2,000 or more	37.2

- Automobile L-R gasoline consumption(total auto consumption for all purposes = 69.2 billion gal/year)
  - All L-R miles, including local = 23.0 billion gal/year
  - All L-R trips over 100 miles = 5.4 billion gal/year

INDUSTRY SENSITIVITY

High X Medium _____ Low _____

- Approximately two thirds of all trips over 100 miles are for L-R
- A significant percentage of L-R trip miles are travelled on weekends
  - L-R trip weekend person-miles are 42.4% of all trip person-miles
  - During weekends, L-R trip person-miles are 76% of all trip person-miles
- 78% of person-miles and 91% of person-trips are by automobile

ADDITIONAL COMMENTS

- People in middle income ranges ($7,500 - $15,000) accounted for 59% of all L-R trip person-miles
- As income increases, the trip person-miles devoted to L-R as a percentage of all trip person-miles, decreases
- There is considerable overlapping among this activity and others, such as skiing
- Total person-trips (1972): 322 million

  57% visiting relatives
  22% sightseeing
  21% outdoor recreation

- Expenditure data are subject to verification

SECOND HOMES

ECONOMIC DATA

- Annual revenues
  - Sales — $ 7.2 billion
  - Related expenditures — 5.0 billion
- Employees
  - Total — 550,000
- *Firms*
  - Developer/Builders — 10,000
- Activity size
  - Second home total — 3.5 million
  - 5% of mobile homes are used for second homes
  - 5% of modular homes are used for second homes

GEOGRAPHIC DATA

- Major states' new lot sales—% of total

- Florida	36	- California	8
- Texas	17	- New Mexico	6

- Percentage of existing homes

- Michigan	8.8	- Texas	6.1
- New York	8.5	- Wisconsin	4.7

ENERGY CONSUMPTION INFORMATION

- Average distance travelled (%)
  - Less than 100 miles — 50
  - 101 to 499 miles — 30
  - More than 500 miles — 20
- Transportation modes (%)
  - Auto — 95
  - Air — 5

INDUSTRY SENSITIVITY

High _____ Medium X Low _____

- Second home travel heavily dependent on automobiles
- 50% are located within 100 miles. Sunday closing impact affects use of homes beyond 100 miles
- Also require heating fuel for homes

ADDITIONAL COMMENTS

- Reduction of second home trips may mean increased leisure time at home
- Second home starts (150,000/year) likely to be reduced
- Mass transit could reduce impact by charters and package trips to second home resorts
- Rentals may suffer at distant resorts but may increase at resorts near to urban centers
- Quantitative figures require additional verification

RECREATION VEHICLES

ECONOMIC DATA

- Annual revenues
  - Sales — $ 2.5 billion
  - Related expenditures — 1.0 billion
- Employees
  - Total — 190-230,000
- Firms
  - Manufacturers — 650
  - Dealers — 10,000
  - Suppliers — 1,000
- Activity size
  - Recreation vehicle total — 5.15 million

GEOGRAPHIC DATA

- Number of production plants
  - California 138
  - Indiana 118
  - Michigan 55
  - Kansas 46
  - Ohio 33
  - Pennsylvania 32
  - New England 12

ENERGY CONSUMPTION INFORMATION

- Average distance travelled is 4200 miles/year
  - 280 miles/trip
  - 15 trips/year
- Average gasoline consumption
  - 420 gal/year
  - 10 miles/gal
- Estimated total annual gasoline consumption: 2 billion gallons

INDUSTRY SENSITIVITY

High X Medium _____ Low _____

- Gasoline limitations could severely limit RV miles driven due to poor gas economy
- Impact on sales of new and used RVs is already substantial
- Due to investment required, those who own RVs could continue to use them, especially for short trips

ADDITIONAL COMMENTS

- Industry sectors include
  - Travel trailers (towed)
  - Camping trailers (folding walls, towed)
  - Truck campers (fit on pickup truck or truck chassis)
  - Motor homes (self-propelled)
  - Pickup covers (protective enclosure)
- Quantitative figures require additional verification

- Establishment of weekend bus service from centralized collection points for second home owners/renters or travelers to resorts is feasible for many such destination facilities

- Hotel operators are promoting the "weekend away" concept in urban centers where mass transit is available

- Package tours providing sightseeing excursions to urban areas or remote attractions using buses or other mass modes have been promoted and it is likely that this type of vacation, common in Europe, may increase significantly in popularity in the United States.

2. SENSITIVITY OF THE L-R INDUSTRY IN SELECTED REGIONS

Data on the geographic distribution of L-R activities is extremely limited. Good information is available on travel revenues by state and, since the primary impact on the L-R industry is likely to result from reductions in travel, this data provides a good indication of geographic sensitivity. Table 7 lists the top ten states in each of three categories:

- Total leisure travel revenues

- Ratio of leisure travel revenues to gross state product

- Total person-nights of leisure travel.

The following observations can be made from these statistics:

- Florida, which appears in all three lists, is particularly sensitive to any loss of travel revenue

- Though their total L-R revenues are not as large as those in other states, Nevada, Maine, Hawaii, and Vermont are heavily dependent economically on travel revenues. When multiplier effects are considered, the dependence becomes even more pronounced

Table 7
Geographic Distribution of Travel Impacts

Total Annual Travel Expenditures*		Ratio of Travel Expenditures to Gross State Product (Percent)*		Person Nights of Leisure Related Travel**	
State	Expenditures (Million $)	State	Ratio	State	Person Nights (1,000)
Florida	3,600	Nevada	27.12	California	110,071
California	3,300	Maine	19.46	Florida	105,771
New York	3,400	Hawaii	19.21	Texas	60,349
Pennsylvania	3,000	Florida	15.46	New York	45,750
New Jersey	2,600	Vermont	15.10	Michigan	45,013
Massachusetts	2,100	New Hampshire	12.99	Pennsylvania	42,460
Ohio	1,950	South Dakota	12.49	Wisconsin	33,988
Illinois	1,670	West Virginia	12.15	Illinois	27,801
Texas	1,500	Wyoming	10.74	Missouri	27,127
Nevada	714	Massachusetts	10.03	Ohio	26,870

*Source: David Hiatt, "Transportation and the Recreation Industry, Background for an Energy Analysis," (expenditures include business, conventions, etc.)

**Source: 1972 Census of Transportation, (excludes business, convention, other - only includes leisure related travel)

Note: The state in all three categories is: Florida.
The states in 2 categories are: California, New York, Pennsylvania, Massachusetts, Ohio, Illinois, Texas, and Nevada.

- Although L-R revenues are not major contributors to the gross state product in California, New York, Pennsylvania, and New Jersey because these states are major industrial centers, the net revenues from leisure related travel are nonetheless large and a significant number of L-R operations in these states will be sensitive to reductions in travel due to fuel shortages

- Four states in the New England Region (Maine, Vermont, New Hampshire, and Massachusetts) are among the top ten states in percentage of GSP derived from L-R revenues. Hence, this region can be designated as particularly sensitive to the energy crisis.

The precise extent of impacts which may be felt by these critical states and regions is difficult to project. Furthermore, there are a number of positive actions which can be taken by states to help reduce the degree of impact. The following general observations illustrate these points:

- States like New York, New Jersey, and Pennsylvania with L-R operations near to major population centers may not be subject to severe impacts. People may shift their vacation travel to locations near to home (e.g., the Jersey shore) and actually increase revenue flow in these areas. Resort operators and home rental agencies along the Eastern shore have reported an optimistic outlook for the 1974 summer season

- Gaming is the major source of L-R revenue in Nevada. Historically, participation in gaming appears not to have been affected significantly by major economic instabilities. Hence, it is quite likely that Nevada's revenues may not be adversely affected by the energy crisis even though over 80% of the visitors to the state arrive by car. This is an example of the insensitivity of particular L-R activities to external conditions

- Several states which depend heavily on tourist revenues have taken innovative steps to insure that visitors have adequate supplies of gasoline:

- Nevada has arranged to keep service stations along the major routes from population centers in California open on Sunday and has advertised that there will be sufficient gasoline available at these stations to meet needs

- Vermont has made arrangements to have gasoline available at ski resorts on Sunday to provide visitors with sufficient gasoline to make return trips.

Metropolitan transit authorities typically do not utilize the available fleet at greater than 50% capacity on weekends. There is consequently an opportunity for local, state, and Federal governments to work together to provide the necessary approvals for these vehicles to be used for recreational transit on weekends. Possible applications include:

- Ski resort shuttles
- Beach resort shuttles
- Transit to spectator sports from suburban shopping centers.

VI. THE NEXT STEPS

VI. THE NEXT STEPS

This report has presented the beginnings of an analysis of the impacts of the energy crisis on the leisure-recreation industry. A number of significant steps have been taken:

- A useful classification system has been developed
- Considerable baseline data on the key parameters characterizing the industry and its interface with energy sources have been developed
- A preliminary analysis of the sensitivity of industry sectors and geographic regions to shortages in fuel has been presented

But the L-R industry is very complex and there are numerous gaps in the data which describe it. As a consequence, additional questions were raised and new lines of inquiry became evident as the preliminary analysis proceeded. If the full impact on the L-R industry, of the fuel shortage, and of alternative conservation measures is to be understood, these new directions should be pursued.

Three specific approaches for proceeding with the analysis are recommended:

- In-depth Data Analysis: The intent is to carry out comprehensive survey and assessment of existing data sources on L-R industries and activities. This survey and the analysis which accompanies it should not be a random data compilation effort, but should rather focus on
  - Developing data required to quantify an econometric model of the industry
  - Reconciling data in order to eliminate internal inconsistencies
  - Establishing requirements for continuing data collection which are consistent with a refined classification system and the econometric model

In addition, this effort should involve a formulation and refinement of the sensitivity approach used in the present study.

Survey To Project Participant Response: The information which is required to convert the sensitivity analysis into a projection of impacts on specific industry segments is knowledge of how individuals will respond to alternative energy conservation measures affecting their L-R options. Many options are open to each person and the economic vigor of the L-R industry will depend on how these options are exercised. The kind of survey which is required to project behavior is not a simple poll, but one which parallels those used in market analysis. Field research should also be done to determine after-the-fact what the L-R responses of individuals to energy shortages actually were.

Case Study Assessment of Selected Industries and Regions: Because of the complexity and fragmentation of the L-R industry, it is desirable to accompany industry-wide analysis with in-depth studies of selected industries and regions. This reduces the data collection and analysis problem to manageable proportions and permits significant impact analysis to be conducted. It is recommended that the continued study of the L-R industry as a whole in accord with the two previous approaches be accompanied by at least two in-depth sector or regional case studies.

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REFERENCES

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32. Department of Transportation, Nationwide Personal Transportation Study, April 1972.

Data on auto travel miles, seasonal variations of auto trips, household travel in U.S., mode of travel, much of data is on non-leisure, work-related travel.

33. Special Travel Industry Council on Energy Conservation, The Importance of Tourism to the U.S. Economy, U.S. Travel Data Center, Washington, D.C., December 1973.

No new data. Based on 1972 Census of Travel, 1972 National Travel Expenditure Study, Destination USA.

34. Louis Harris & Associates (for Travel Weekly), The Character and Volume of the U.S. Travel Agency Market, March 1973.

35. A.D. Little, for Economic Development Commission, Department of Commerce, Tourism and Recreation - A State of the Art Study, 1967.

General discussion, little "hard" data. Discusses methodologies to use.

36. U.S. Scheduled Airline Industry, Air Transport 1973.

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37. Laventhol, Krekstein, Horwath & Horwath, Lodging Industry, 1973.

Statistics on revenues, occupancy, etc.

38. Harris, Kerr, Foster & Co., Trends in the Hotel/Motel Business, 1973.

"Hard" data for 1971 & 1972 on revenues, broken down by region, size, and type.

39. David Hiatt, "Transportation and the Recreation Industry: Background for an Energy Analysis," Research Paper, December 1973.

Interviews

To supplement the above reference information, over fifty interviews were conducted with trade associations, companies, area representatives, and federal, state and local government personnel during the two-week report period.

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