

carried out by the public or employers, governments have failed to set an example by having or carrying out similar actions. Provision of free parking for all government employees, failure to have government employees develop (at a minimum) personal contingency plans, and the lack of aggressive implementation of governmental contingency measures have placed government at all levels in a position of being ill-prepared to deal with a crisis. During the gasoline shortage in 1979, many private employers were better prepared to deal with the crisis than either the city or county of Los Angeles.

This credibility problem leads to another barrier—even if government plans for a crisis, people will not believe government. So, carefully developed plans may prove to be inappropriate as people respond differently than government had anticipated.

Another obstacle to effective governmental response is the creation of special-interest groups, which has occurred within the past few years. Each of these groups represents a narrow constituency with its own parochial view on a problem or issue. As a result, elected officials find it difficult to develop broad solutions or programs. We have become a society that knows how to debate solutions but not how to discuss a problem. Confrontation and adversarial modes used by these groups make it difficult, if not impossible, to discuss individual perceptions of the problem and to construct solutions that satisfy a variety of needs. For local governments trying to develop contingency plans, this leads to the production of plans that reflect the concerns of the most-vocal interest groups.

In addition to a lack of credibility and to the demands of interest groups, local government officials (administrative and elected) harbor certain attitudes that serve as barriers to effective governmental response. First, there is an engineering-construction bias in transportation planning and programming. This results in solving problems or meeting needs through the development of capital-intensive services and facilities. These projects require extensive design work and lead time to construct or use. Government, until recently, has placed a heavy emphasis on increasing the

supply of facilities (e.g., roads or rails) or services (e.g., transit) rather than on attempting to influence demand (through marketing and advertising).

A second attitude held by many government officials is that transit must be very basic. Many officials find it difficult to spend public dollars to make transit as comfortable or as convenient as the automobile. The fact that many areas did not have attractive transit systems represented a missed opportunity to capture new riders during the gasoline shortage in 1979. Many riders who turned to buses were turned off by the poor quality of service and stock and have since reverted to their automobiles. Although ridership peaked during May and June, it has since declined and leveled off.

The final attitude possessed by government officials is, in many respects, the basic reason why government cannot respond effectively to crises. For every problem there is a program, and with every program there is bureaucracy that does not move quickly. By the time government finds the mechanism to coordinate its activities, debates the solutions to the problem, creates the plans to meet the problem, and establishes the bureaucracies to carry out the plans, the public has long since taken matters into its own hands and found its own solutions.

Government would be well served in taking a minimal role in responding to energy contingencies. Questions about the ability of government to respond decisively and quickly because of institutional, political, and social barriers abound today. However, the public mood raises questions about whether government should respond to them. This does not imply that there is no role for government, only that government should do the least necessary to facilitate individual responses to energy crises. It suggests that government must do a better job of identifying what the public wants and needs. It means planning with people, not for people. In doing so, government would be serving both itself and the public interest. If, however, government insists on assuming a larger role, it will only serve to fuel the current public sentiment to "clean house".

Selected Issues Related to Governmental Responses to Energy Shortfalls in the Transportation Sector

William H. Crowell

The variety of energy supply and cost perturbations that have shocked the economy of this country (and others) since the early 1970s has gradually forced a serious rethinking of the way the transportation sector will go about moving goods and persons in the future. The unprecedented rise in the cost of petroleum-based fuel during 1979, where consumers saw the price of gasoline essentially double, has finally sensitized the traveling public to these concerns.

In the past, it frequently appeared that people did not really believe that an energy crisis existed; or they would accept that it existed while showing a strong reluctance to take any serious remedial measures. The recent political reaction to energy taxation in Canada, for example, and the consistently negative response to major increases in fuel taxes in this country, show the real difference between acceptance of the problem and some of the possible cures. The reluctance is to be expected given the energy-intensive tradition of the United States relative to other industrialized countries. This country's energy use per capita is more than twice that of West Germany, France, and England and almost three times that of Japan (1). An important factor in this wide gap is that the eight other industrialized countries in Europe plus Japan had an average energy consumption per unit of transportation output (e.g., ton mile or passenger mile) that was 60 percent lower than

that in the United States, while the averages for the other residential and commercial sectors were only 10-25 percent lower (1). Most of the transportation-sector differential is due to passenger travel, with U.S. citizens by using relatively heavy, energy-inefficient automobiles for 95 percent of their trips versus an estimated 22 percent for Japan (2). People in the United States have a fairly clear reason for underplaying possible crises and resisting substantial moves to alter energy use—to do so is to go against a strong tradition of carefree energy consumption.

When viewing the most recent energy shortage of 1979, one does not have to be an energy expert to realize that the responses made by various levels of government, especially state and local, were not much better than in the 1974 shortfall. A number of federal laws and regulations had been passed—and at least partially enacted—in addition to the establishment of the U.S. Department of Energy (DOE). A majority of the states made some attempts to improve their energy readiness. However, the bulk of these actions appeared to be more theoretical than pragmatic when it came to relieving travel pressures that the supply interruptions produced. The significant change in the level of financial support for mass transit operations, to a great extent caused by the 1973-1974 crisis, did alter the modal picture, or at least allow transit to hold its ground in some

areas, by maintaining (or expanding) service levels and moderating fare increases. However, conventional transit handles only 1 out of every 20 trips nationwide, and even the dramatic stories of huge patronage increases from Los Angeles and elsewhere could not change this fact. The picture on the freight side of the problem is much more clouded and complex because (a) regulatory control is even more involved and (b) the availability of alternative modes for a given freight trip is less likely than that for person trips.

One of the most important overall factors of the whole contingency-responses question, however, is that the ability of the nation's economy to react effectively to true petroleum shortages is mainly dependent on local reactions and adjustments that follow federal (e.g., allocations) and state (e.g., odd-even plans and minimum sale regulations) actions. In addition, the social, economic, and fiscal impacts—most keenly felt at the local level—create a frustrating situation whereby local governments try to tackle problems whose causes and principal remedial actions are exogenous to the area. The recent voluntary energy goals for gasoline-demand reductions asked by President Carter of all states are an example of this. When faced with a voluntary reduction (that the President can make mandatory) of roughly 11 percent relative to 1979 levels by the end of this year, states depend primarily on locally controlled transit, paratransit, and transportation management schemes to attain such goals. This situation, in many ways, parallels a state's responsibilities under the Clean Air Act; many urban areas become heavily involved in their state's submittal of transportation control plans to reduce vehicular travel as part of the air-quality implementation plans. The problems and goals are defined and mandated at the federal level, the states bear the legal responsibility of attaining these goals, but the actual programs and strategies (and their positive and negative socioeconomic impacts) are mainly local concerns.

THE FEDERAL OVERVIEW

A brief overview of the federal perspective in the overall contingency-planning picture shows that the bases for major federal actions in this area are the Emergency Petroleum-Allocation Act of 1973, the Energy Policy and Conservation Act of 1975, and the Gasoline-Rationing Regulations of March 1979. The Emergency Petroleum-Allocation Act gives the Executive Branch the authority to determine in what manner scarce petroleum resources will be distributed (by user group and geographic area) and to determine reasonable ceiling prices for these products. It sought to try to minimize the economic and social disruption associated with petroleum shortages. The essential components of this allocation program are (a) establishing current available fuel supply relative to some base period, with the ratio of the two equal to the allocation fraction and (b) judging which sectors of the economy would get as much fuel as in the base period, or some lesser amount as determined by the application of the allocation fraction. Important here is the fact that public transit services would receive an amount equal to 100 percent of their current requirements times the allocation fraction.

The Energy Policy and Conservation Act gave the President the power to initiate a variety of contingency actions. Clearly the most extreme and controversial of these actions involves a stand-by gasoline-rationing program. The various programmatic options still being debated include a fixed gasoline ration per registered automobile, the legal sale of coupons on a white market, and special supplemental allocations for public transportation operations. This act also allows the President to implement mandatory energy conservation plans for states, the strategic petroleum reserve (e.g., the storage of oil in salt domes), and the scheduled improvement of motor vehicle energy efficiency.

Energy Taxation

It is interesting to note that the Energy Policy and Conservation Act also ruled out the use of a user tax system as part of any fuel-rationing program. This solidified the country's continuous resistance to fuel taxation and, particularly, to retail gasoline levies. Other countries have considerably higher federal-level gasoline taxation; generally, these high tax rates have been in effect since World War II or earlier. Unlike this country, Western European countries have traditionally been oil importers, and excessive use of petroleum products would, and currently does, place a severe burden on their economies and currencies. The picture of the United States as a major self-sufficient petroleum producer has clearly changed, but the way that the nation prices (i.e., controls supply) its petroleum sales has not (3). The tax recently proposed by President Carter on imported oil, with a projected impact on gasoline prices of up to 10 cents/gal, is a partial move in this direction. Some observers feel that this action is too little and too late. Moreover, the political survival of more taxation is doubtful, particularly with the probable passage of some form of the so-called excess profits tax and the already-large increases in gasoline prices over the past nine months.

Some domestic critics and many foreign ones feel that this country's underpricing of energy has placed it in an economically vulnerable position, exposed this and other oil-importing countries to greater pressure from members of the OPEC and delayed the development of alternative energy sources. However, several points have to be remembered before the United States contemplates plunging into the world of high taxation (50-75 cents/gal or more) of gasoline. If the goal of the tax is primarily to reduce gasoline use, is there sufficient transit and paratransit infrastructure in place to handle the trips diverted from automobiles? Furthermore, the equity considerations of such a control-by-price method cannot be easily resolved, particularly if the tax is added in one large increment. This has traditionally been one of the main arguments for the rationing system with the white-market element (even though this clearly does not remove the charge of the "rich getting all the gas they want" so often leveled at a taxation-based reduction scheme).

There, of course, is no reason why such taxation should be limited to motor vehicle fuels only. Taxation could play a major role in domestic and world conservation of irreversible resources, the conversion to other forms of energy and more energy-efficient commerce and life-styles, and the likelihood and severity of the very energy emergencies that are the focus of this meeting.

Gasoline Rationing

The gasoline-rationing regulations, in addition to spelling out the rationing program, cover a range of other actions available to the federal government, including (a) a restatement of allocation and price-control schemes and mandatory conservation goals; (b) increased enforcement of speed limits; (c) minimum-purchase, odd-even, and other service station operation controls (since relegated to the states by the President); and (d) a set-aside program for discretionary use of states for emergency allocation.

In summary, it is clear that the federal government has rather extensive authority in the energy contingency area, with actions ranging from voluntary programs to complete control of the supply allocation and the price of fuels.

THE STATE PERSPECTIVE

The very nature of the petroleum industry, particularly its national and international structure, and the broad regulatory powers held by the federal government in this area, have left the states in wait-and-react position. All major decisions on domestic oil production, imports, geographic and sector allocation, and pricing policies are

essentially in the hands of the federal government—particularly the Executive Branch. The Energy Policy and Conservation Act did establish a requirement for states to develop energy conservation plans for all sectors, including transportation, and the voluntary gasoline-demand reductions that DOE is putting forward for 1980 for each state is an outgrowth of this act.

The principal involvement of the states in contingency planning and implementation is their incremental control, within the overall context of federal guidelines, over the supply and retail sale of gasoline for motor vehicles. This control has two major elements:

1. Fuel set-aside programs—the release of set-aside fuel reserves during periods of supply disruption, and
2. Gasoline sales limitations—the constraints placed on when and how much gasoline can be sold (the main options here include odd-even sale days, minimum-purchase requirements, and, in some cases, controls on when service stations are closed or open).

A number of states independently established some form of set-aside program before the federal program was in place. Many had also implemented one or more of the gasoline sales restrictions before the President relegated his authority in this area to the states in 1979. In a short-term supply contingency these types of market interventions, particularly the direct limitations on sales, are crucial to the quick control of the panic-buying pattern that is often a central element in a fuel shortage. Such consumer patterns, fed by the fear of being caught with no gasoline and no available supply, can seriously disrupt the supply-demand balance well beyond any actual reduction in the supplies being delivered to service stations.

Assume, for example, that a state had a supply shortfall of roughly 10 percent for its 7 million registered vehicles. Typical weekly demand was 10 gal/vehicle, and the average vehicle's 15-gal tank was usually half full. The vehicle fleet would therefore consume roughly 10 million gal/day (7 million vehicles \times 10 gal/week \div 7 days/week). The moving storage in these vehicles would be about 52.5 million gal (7 million \times 7.5 gal/tank)—the equivalent of more than a 5-day supply for the entire state. However, if a panic atmosphere led the average driver to top off his or her tank with 3 gal/day more, this would represent a 40 percent increase in the moving storage, thus making more fuel unavailable for sale at stations (4). The net impact of these panic purchases can be reviewed from two perspectives:

1. At a time when the actual gasoline supply available for sale at stations is being reduced by 10 percent, the topping-off problem can effectively reduce available supplies much more; and
2. With supplies to stations decreasing and a parallel decrease in demand hoped for to balance it out, panic-fed demand, particularly in the short term, can actually increase.

Sales patterns from the mid-1979 crisis months show, of course, that gasoline sales did decline. Although sales nationwide in the first three months of 1979 were above the levels of the previous two years, by May they were lower (the first time since 1974 that monthly sales were below levels of the previous year) and continued to remain low throughout the rest of the year. The largest travel drops were on rural stretches of the Interstate highway system, mainly due to the changes in recreational travel brought about by fears of supply problems on long-distance vacation trips and, to a lesser extent, by increases in fuel prices. (Even for an automobile trip of 2500 miles, for example, an increase of 20 cents/gal figured at 15 miles/gal would only add about \$33 to the cost of the vacation—a relatively small amount when compared to the probable total trip cost.) The serious impact that these travel diversions created for the tourist-oriented economic base of states such as Arizona, New Mexico, Florida, and others is well known, and it is

clear that the impact of the shortage and its size differed considerably among states.

However, an equally perplexing intrastate pattern has been apparent in the two major supply disruptions. While certain areas of a state experienced serious supply disruptions and all of the associated social and economic impacts, other sections were barely affected. This dichotomy was very evident in New York during the 1979 crisis. The greater New York City area had a serious gasoline-supply shortage, accompanied by typical long station queues and shortened operating hours. However, other areas of the state, some very close to the New York City area, experienced only minor fuel supply problems or none at all. One would expect that the greater New York City metropolitan area, with the most extensive transit system in the country, should bear a greater burden on some common basis (e.g., reduction per capita), but this supply disparity was significant.

Similar disparities in the severity of the most recent shortage among various locations within a state occurred in other states as well. The extreme social and economic disruption that accompanies a real (or at least partially imagined) gasoline supply problem makes it essential for states to learn how to identify, address, and help resolve such imbalances. The major constraints are that (a) states in many ways have very little control over such fuel-allocation matters; (b) there are clearly political considerations involved when it is proposed to give area A's fuel to another, possibly creating some supply problems in A in the process; and (c) there is often no easy, inexpensive, quick method of redistributing such supplies—that is, there is nothing comparable to the power grid or pool used by utility companies to transmit almost instantaneously huge amounts of energy among areas within a state or among different states.

In summary, state governments are placed in a difficult middle ground between the more fully empowered federal agencies at the top level and the regional and local officials, agencies, and authorities grappling with the direct impacts of the shortages at their very doorstep. States have exerted considerable leverage in the past in the control of retail gasoline sales, have some flexibility and discretion under federal allocation schemes, and would play a similar role under the most likely rationing plans. Recent surveys by the National Governors' Association show that most states have already adopted or are actively developing contingency policies and often have some meaningful enabling legislation to support these plans (5). There still remains, however, the question of how a state can and will act as the single voice that must claim the achievement of a certain percentage reduction in fuel use, while the real pressure (political, financial, social) remains primarily at the local level. This point is the principal focus of the next section of this paper.

CONTINGENCY PLANS FROM REGIONAL AND LOCAL PERSPECTIVES

Much of the discussion that I have heard at various meetings and conferences about the energy crisis contingency-response plans and the like is, unfortunately, similar to that concerning the overall governmental handling of the air quality problem. Once again, the pattern has been established wherein the federal government sets goals to be met by the states, but problems and programs are dealt with mainly on the local level. If the nation's success in this endeavor were measured by comparing the goals of the Clean Air Act and other related legislation to the actual programs in place, the scorecard might read this way: (a) producing new cars with lower emissions—fair, with considerable foot-dragging and delays by manufacturers, government agencies, and others; and (b) reducing the volume of polluting activity (in this context, vehicular travel)—poor to nonexistent. Travel and modal-choice habits were (and are) deeply engrained in the nation's psyche. Political, social, and economic resistance to the far-reaching, ambitious transportation control plans of the

early 1970s was intense, and it effectively showed that the local political mandate simply was not there to change things that quickly. Legislation eventually caught up with reality, and the 1977 amendments to the Clean Air Act (by 1977 most major goals were originally supposed to have been achieved) now talked of 1982 and 1987 deadlines.

The similarities between the transportation energy-conservation contingency programs and the approach to the air quality question are many and should (it is hoped) provide energy planners with some guidance on what to do and not do. The following points deserve special attention.

Common Strategies

Clearly, the experience with trying to reduce vehicle miles of travel (VMT), improving transit patronage, and so forth for air quality reasons (including special programs for air quality emergencies) should provide some aid in selecting and realistically evaluating the potential success of proposed schemes.

Lack of Consistent Public Support

The public supported the concept of environmental improvement and the "moral war" on energy problems, but both programs have shown a strong tendency to languish over the long term. The public's general lack of any true bite-the-bullet spirit after the 1973-1974 shortage and substantial cost increases is a case in point. The various energy programs do, however, have something that environmentalists do not—the strong reminder of supply shortages and huge cost increases.

Key Dependence on Mass Transit

Both programs have looked to conventional transit modes (and none recently at paratransit) as the key to reducing emissions and/or energy per passenger mile. The big difference, however, is that the environmental programs have had to depend on regulated incentives to use these modes, while energy programs once again have the occasional benefit of suddenly experiencing a desperate need for transit (e.g., the temporary transit crush in California in mid-1979).

Regulatory Mandate Versus Available Funds

Many urban areas complained that the strategies needed to reduce VMT also required more funding than was available for planning, administration, operations, and capital improvement, particularly in the mass transit area. The National Mass Transportation Assistance Act of 1974 and later revisions changed this somewhat, but many cities are still fiscally unable to carry out the types of service and fare policies that could really affect modal split. Although energy contingency programs are helped by the strong transit demand that such emergencies create, the operational side is very difficult and expensive (e.g., short-term expansion of capacity, additional vehicles and operators, and overtime pay). There are also extraordinary costs associated with special traffic management problems, provision of alternative travel information, control of special transit and paratransit services, and the like that can place a financial burden on localities.

Protection of Local Economic Base

Much of the private sector resisted plans to reduce VMT as a means of improving air quality, mainly because such schemes are viewed as reducing accessibility. This resistance was the primary reason for the defeat of these plans. There is clearly an equally strong relation between the policies to handle the economic disruptions of a person and goods movements that have been disrupted. The competing needs, for example, of downtown retail centers versus large malls on the periphery of urban areas can be

difficult to balance when creating a package of emergency response strategies.

LOCAL-LEVEL RESPONSIBILITIES

Numerous meetings, conferences, and workshops, along with the painful but valuable experiences of the 1974 and 1979 gasoline shortages, have shown that all levels of government must be prepared to respond quickly and thoroughly to such emergencies as they arise in order to reduce their negative impacts and the spread of a panic atmosphere that can only worsen the problem. One recent guidebook to the development of contingency plans (6) determined that the main responsibilities of local governments are in the areas of (a) activities related to transportation system management and transportation improvement plans, (b) ridesharing and carpooling, (c) alternative work schedules, (d) client-agency transportation services, and (e) conventional transit services.

I feel that these types of programs are the most crucial ones in terms of quickly establishing alternative travel methods to the 95-5 (95 percent automobile and 5 percent other) modal split that exists in nonemergency situations. Although the federal and state governments have control over what one might call fuel-shortage correction actions (e.g., allocation, rationing, and gasoline sales controls), the real burden of response (when the real shortfall is actually defined) falls on local officials, agencies, and, of course, the traveling public.

A number of basic factors directly affect the planning and implementation of such local plans. Some of these factors are discussed briefly here.

Sources of Financial Assistance

From what sources will funds be made available to finance the development of such plans and, more important, their implementation? Metropolitan planning organizations (MPOs) have recently been mandated to include contingency plans in their overall transportation-planning activities, but they did not receive any funding increment to cover these activities. Transit assistance under Section 5 of the National Mass Transportation Assistance Act currently has no method of responding to higher deficits related to contingencies. Similar questions associated with state and local aid plans need to be addressed.

Full Determination of Responsibilities

The myriad of agencies, authorities, MPOs, and the like that have gradually complicated the handling of transportation, especially in urban areas, have also made it difficult to develop single-purpose plans that avoid overlap, have a clear delineation of responsibilities, and are accepted by all parties involved. The fact that MPOs are generating, or at least coordinating, such planning efforts, at a time when relations between MPOs and various state and local agencies are strained at best in many urban areas, seriously jeopardizes the process.

Full Private-Sector Involvement

A recent extensive transportation survey of 400 firms in New York City (7) showed that many firms had been irritated in the past by the limitation of their participation in air-quality-control planning to the token-representative level. While they realized that their interests were different from those of government agencies and that they really did not expect any kind of veto power over such plans, they did want to play a more meaningful direct role in the planning process. This was particularly true in the goods movement area about which they felt government agencies were rather naive. In energy emergencies, the common problem that the private and public sectors face is more easily accepted than the air quality problem, and the potential economic impacts can be much more severe.

However, local officials must allow full participation by business interests and not let the attitude of "we are above any special interests" keep out or alienate the private sector.

Conventional-Transit Versus Special-Transit Conflict

Since the early 1900s, the tradition has been to provide a single form of public transit on a monopoly- or controlled-franchise basis that minimized or eliminated competition. Various federal legislative actions have furthered this tradition. While the acceptance of paratransit, the brokerage concept, and related schemes has grown of late, there are still numerous roadblocks to the expansion of such schemes. This is particularly true if such plans are, to some extent, pushed before an emergency hits to both ensure readiness and aid overall conservation. Numerous studies have shown how transit and paratransit modes often compete directly with each other rather than draw jointly on the pool of drive-alone commuters.

CONCLUSION

The material presented here was not intended to address all of the relevant issues associated with energy contingency problems and constraints faced by various levels of government. Rather, I have merely tried to identify and discuss a number of key issues that I feel have not been covered sufficiently and need to be. This conference provides a useful forum for the discussion of these topics, although it is clear that they cannot be fully resolved at this time. The experiences with plans to reduce vehicular emissions showed how a public drive to attain a specific goal (improved air quality) can get hung up at the point where the business-as-usual pattern of doing things has to change if any real impacts are to be expected. Many of the long-standing concepts of transportation in this country (e.g., low energy taxation and elimination of transit's

competitors) that bought us into the 1970s are now being challenged, and some may have to change or at least become much more flexible. This will not be an easy task, because programs that produce a net benefit will still have winners and losers. It is to be hoped that the exchange of ideas at conferences like this and occasional shocks like the mid-1979 energy crisis will help prompt useful change and will do more than just get us through shortages every five years.

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Government Agencies and Fuel Shortages: Past Actions, Current Problems, and Future Opportunities

Charles Carlson

The fuel shortage of 1979, like the shortage of 1974, caught the nation unprepared. Government agencies, political leaders, private businesses, and consumers were generally unprepared to cope with a sudden drop in fuel availability and a sharp rise in fuel prices. Among the major consequences of this lack of preparedness were (a) public anger, confusion, and frustration over queues at service stations and the apparent inability of government to solve the problem; (b) severe overloading of all forms of public transportation services in many localities; and (c) substantial damage to important sectors of the U.S. economy (e.g., travel and tourist industries).

Some of these negative impacts probably could have been avoided if government agencies and the private sector had sought to implement well-constructed transportation contingency plans when the shortage struck. Unfortunately, few organizations possessed these plans in the spring of 1979.

Lacking comprehensive contingency plans, what did major institutional actors do in response to the 1979 fuel shortage? In addition, and perhaps more important, what reforms would help the nation prepare for and respond to future fuel shortages? This paper attempts to provide some answers to both these questions, albeit from a general and primarily qualitative point of view. The paper focuses on mass transportation services (i.e., transit, paratransit, and ridesharing services) and automobile travel.

IMPACTS OF THE SHORTAGE

Other papers prepared for this conference describe in detail the impacts of the 1979 fuel shortage on passenger travel and the national economy. For this reason, only a few observations are necessary here prior to discussing the ways in which major institutions responded to the shortage.

Most analysts believe that, in comparison to unconstrained demand, there was a national retail gasoline shortage of between 5 and 10 percent during the late spring and summer of 1979 (1). This shortage first became visible in May and peaked in late June and July. Because of a variety of factors, including government policies and petroleum-producer actions, this shortage was not felt evenly throughout the country. Indeed, some areas of the country had little or no difficulty with their fuel supplies during the shortage period; however, the northeastern region of the United States and several states scattered across the country experienced shortages that may have approached 20 percent.

Some statistics help to define the national impacts of the 1979 shortage. Table 1 shows the percentage change in the use of various modes that occurred in 1979 over such use during the same months of 1978. (Data for Table 1 and Table 2, which follows, were obtained through informal communication with representatives of these modes and