

HOW CONSUMERS FEEL ABOUT ENERGY:
 Attitudes and Behavior
 During the Winter and Spring of 1976-77*

by

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June 1977

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The winter of 1976-77 was one of the coldest in the Nation's history and brought to the American people a reminder that there is an energy problem. It also brought a new President who had new policy proposals focused on the natural gas shortage and other long-standing energy issues.

This paper describes and analyzes the results of several surveys of the American public done from February through May of 1977. These surveys outline the effects on American consumers of the cold, the natural gas crisis, and the Carter administration's energy policy proposals.

In brief, the surveys show that people are most concerned about the rising cost of energy, are poorly informed about broader implications of the energy situation, are concerned about energy shortages that affect them personally, would prefer to make no sacrifices, but if necessary, prefer sacrifices that are equitable.

EFFECTS OF THE FRIGID WINTER

The winter of 1976-77 was the coldest on record in many parts of the country, particularly east of the Rocky Mountains. The need for heat became urgent for householders (who use 15 percent of the Nation's total energy) for heating and commercial building occupants (who use another 8 percent for warmth). Since about three-fifths of the country's homes are heated by natural gas, the enormous demand for that fuel put a severe

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strain on the willingness or ability of the natural gas industry to produce and distribute their product where it was needed at the then-prevailing prices. Since homes and hospitals have first priority for natural gas, the result was that some interruptible industrial customers were unable to get enough gas and had to close down. To avert even more widespread industrial shutdowns and unemployment, twelve State governors declared energy emergencies, and ordered certain measures to help curtail the use of natural gas. Such measures included closing down schools, shortening store hours, and urging people to turn down their home heating thermostats. Nine other States had severe problems of inadequate natural gas, even though no official emergency was declared.

During February 4-6, 1977, a Federal Energy Administration national telephone survey of 1,014 people determined the effects of the natural gas crisis on the public. The Gallup Organization conducted the interviews for FEA. This survey showed that very few people had difficulty getting fuel, but, in the emergency States, four-fifths of the householders had paid higher prices for fuels since Thanksgiving; two-thirds had found the stores they used open fewer hours; one-third had their children's schools closed; one-fifth had a family member work fewer hours than normal; and in one-tenth of the households a family member had lost a job or been laid off.

Some areas were harder hit than others. In States where gas was short but in which no official emergency had been declared, half the people said their children's schools had been closed. The frigid effects were widespread east of the Rockies, where half the people reported shortened store hours, and three-fifths reported lowered temperatures in their workplaces.

ENERGY CONSERVING BEHAVIOR

Three-fifths of the people interviewed thought that the solution to the fuel shortage was in their own hands. However, the efforts actually undertaken to save energy were found to be minimal in such important areas as home temperature settings, although relatively impressive in other areas such as home insulation. People tended to lower their temperature settings when they resided in a State that had a declared emergency or actual natural gas shortage or lived in a home heated by natural gas. The most frequent reason people gave for reducing temperatures was to save fuel.

In a followup FEA survey on March 12 - 14 the Gallup Organization again conducted 1,041 telephone interviews. In a subsample of homes, the temperatures were measured directly with a thermometer. In an independent survey of 1,500 homes by Louis Harris from March 1 - 7 (again where the indoor temperatures were measured by a thermometer), the average temperature in American households was measured to be $70^{\circ} \pm 2^{\circ}\text{F}$. during the day and

69° + 2° F. at night. This was for a sample of homes where there was a heating load, since these indoor temperatures were measured where the outside temperatures were below 65° F. The average indoor temperatures were no more than 1° F. lower than a year before (based on previous FEA surveys), with little or no change in the previous two years. Only about a third of the households had lowered their temperatures from what they had been in the previous year.

In both the February and March FEA telephone surveys as well as in an independent in-home survey by the Gallup Organization done at the same time, the average temperature people said they were keeping their homes was 66° F. during the day and 64° F at night. The difference between that temperature and the measured actual temperatures of 70° F. from the same time indicates a feeling on the part of people that they ought to have lower temperatures. Also, it is possible that many American thermostats are miscalibrated, but it is unlikely that they are all miscalibrated in the same direction. The President had asked (in his fireside chat shortly after his inauguration) the people to set their daytime temperatures to 65° F. and nighttime temperatures down to 55° F. There is at least a 10 percent overall difference in fuel consumption between the temperatures people said they had and what they were directly measured to have. Thus, a large fraction of the public felt they should be saving energy during the winter's crisis, even if they were not.

This difference in temperatures also shows that direct measures of behavior are needed to validate verbal reports of behavior.

To validate consumer survey data on conservation behaviors, Decisions and Designs, Inc. conducted a validation study for FEA which used, in addition to consumer survey data, data from manufacturers, supplies, and installers of insulation, storm windows, and door and window sealings and gas company consumption data. These data were pooled to make estimates of conservation behaviors.

As contrasted with the minimal efforts found with home temperature settings, this validation study found a significant amount of home insulation had been done by the American people. As of March, 1977, about 80 percent of American households are insulated, to some extent, an increase from about 70 percent in 1976 and 62 percent in 1975. About half of American homeowners have added insulation to attics, ceilings, or walls while living in the houses they now occupy. However, about half of all the people do not think that adding more insulation to their homes will help save energy.

The study also found that about half the households have storm windows or doors, and one-fifth more storm windows and doors were installed from 1976 to 1977 than in the previous year. About half had weatherstripped

their doors or caulked around the outside, 5 percent more than had done this the previous year. About half of the people said they turned off lights when they did not need them (this is about the same fraction as the year before), and about a third of the people reported they were driving less during the winter than they had before Thanksgiving.

The March FEA survey showed that people who think the energy shortage is real also tend to be more concerned about such shortages, and that they tended to practice certain conservation behaviors. In the home, this included turning off lights, using less hot water, reducing the home temperature, and closing off unused rooms. It also included insulating the attic, caulking windows and doors, and using storm windows or plastic sheeting over windows. People who reduced their home heating also tended to have purchased a more energy efficient car. They tended to drive less, drive slower, carpool, to use a bicycle, and to walk. Those who actually had lower home temperatures as measured by the Louis Harris survey using thermometers in the home in March tended to be higher income, suburban people in professional and managerial occupations. These correlations give us a picture of the energy conservers in our society. Unfortunately, for the Nation's energy problem, these conservers are a minority.

The obvious question when relating these statistics is why are more people not making more efforts to save energy, especially when the need to conserve has been highlighted by the winter cold and natural gas shortage, the administration's emphasis on energy conservation, and the exposure the media has been giving the energy issue. The general answer lies in the nature of the awareness, perceptions, and attitudes people have about the energy problem.

AWARENESS AND ATTITUDES TOWARDS THE ENERGY PROBLEM

A large fraction of the people lack the knowledge about what to do to save energy. Half the people surveyed thought one must turn down the temperature 5° F. or more in order to save any energy and did not know that turning down the temperature even 1° or 2° F. would save. There is an enormous need for public education on such specific points as this as well as more general information about the energy problem this country faces.

Moreover, people are simply oriented to their family's comforts and welfare. At the beginning of February, those who said they had not turned down the temperature in their homes (one-third of the people) were asked why. The reasons mentioned most often were that it would be too cold or uncomfortable, that they have reduced all they could, that there were sick or elderly people in the family, and that they had small children or babies. They were then asked what it would take to get them

to reduce their home temperatures. The most frequent answers were "nothing" (by about half the sample), and they would if there were a real shortage or curtailment.

The reality of an energy shortage is not a given for about half the people in this country. Even during the natural gas shortage in February, only about three-fifths of the population thought the fuel shortage was real, and by March less than one-half thought so. This fraction has not changed significantly since October 1974, after the end of the Arab oil embargo. About one-third of the public is quite skeptical about any energy shortage, and think it is a contrivance for economic or political gain by vested interests. This fraction has not changed significantly since the Arab oil embargo. A smaller percentage of lower income and blue collar people than of higher income professional and managerial people believe the energy crisis is real.

Skepticism is partly based on ignorance. In May 1977 a Gallup survey found only half the public knows that the United States must import oil to satisfy its energy demands, and only one-tenth of the public has an accurate idea of how much petroleum the United States does import. These findings on energy must be put into perspective. A University of Texas national survey of 10,000 people on diverse topics found less than half of the adult population to be "functionally competent." If a large fraction of people are generally unaware of what is happening in the world outside of their personal experience, it is not surprising to find them unaware of the nature of the Nation's energy problem.

The May Gallup survey also found that the less informed people are, the less receptive they are to calls for energy conservation and sacrifice. Those concerned and those who think the energy shortages are real are more likely to hold attitudes that deny consumers the right to waste energy and also to support policy proposals that foster energy conservation such as taxes on fuels and gas guzzling cars, tax credits for home insulation, and governmental requirements for the manufacture of more efficient appliances. The concerned are 10 to 30 percent more likely than the unconcerned to support conservation policies.

ATTITUDE TOWARD GOVERNMENTAL POLICY PROPOSALS

Two-thirds of Americans feel that consumers do not have the right to use as much energy as they want to and can afford to. And, four out of five people feel that people should not be allowed to drive their cars and heat their homes as much as they want to if this means we all become dependent on foreign sources of oil and gas. Three-fourths of the people also feel that what they do does make an important contribution to helping solve this country's energy problem. Given these general attitudes, what do people say should be done?

Nine-tenths of Americans think the Government should help solve the energy problem. The Government, of course, has been visibly trying to help solve the Nation's energy problem for more than 4 years now. Many different kinds of proposals have been publicly debated over this time. The Carter administration's National Energy Plan is the latest set of proposals for enactment into law. From the beginning of the Carter administration up through the present time, the components of this plan have been extensively discussed by the Administration, the Congress, and the media. Throughout the winter and spring of 1976-1977, American consumers' attitudes toward these policies were measured by public opinion surveys. These surveys have shown how the American public has responded to this energy policy debate.

By a margin of three to one, people tend to prefer voluntary measures to compulsory ones, even while realizing that voluntary ones may not be so effective. People prefer policies that perceive to be fair. People also prefer laws that give people incentives to save energy, rather than those that penalize them for using it. Thus, tax credits are more popular than taxes. In March, for example, by a margin of three to two, people preferred tax rebates for people who purchase cars that get very good gasoline mileage, but also by a margin of three to two opposed making car buyers pay an extra tax of several hundred dollars if they buy cars that get poor gasoline mileage.

Attitudes toward specific policies depend on people's perceptions of the nature of the energy problem. For example, during the natural gas crisis, as large a fraction (one-third) of the people felt that the gas shortage was due to companies withholding gas to get higher prices as thought the shortage was due to the colder weather. Support for energy policy proposals is significantly higher among those people who believe that the energy crisis is very serious. This is especially true for proposals calling for sacrifice.

In February, when asked what the main thing they thought the Government should do to help solve energy shortages, the most frequent answers were to develop existing resources, try to get people to conserve energy, and develop new technologies, as well as to investigate the oil and gas companies to make sure they are not holding back production.

Specific events such as the natural gas crisis and factory closings affect attitudes towards energy policies. For example, in February about two-thirds of the people were of the opinion that factories and powerplants that cannot get natural gas should be allowed to burn the kind of coal that causes air pollution. In April, however, four-fifths thought the Government should make industry use pollution-free coal.

Attitudes towards specific policy proposals have varied somewhat during the winter and spring, as shown by the examples in the following tables.¹

Table 1²

Attitudes Over Time in 1977

<u>Policy Proposal</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	
Gasoline and fuel taxes	0.2 .7	0.1 .9	0.4 .5	0.3 .5	FAVOR OPPOSE
	(Tax)	(Rebate)			
Auto taxes and rebates	.4 .6	(.6) (.4)	.6 .4	.5 .4	FAVOR OPPOSE
Raise fuel price ceilings	.2 .7	- -	.4 .5	.3 .5	FAVOR OPPOSE
Tax rebates for insulation and solar equipment	.5 .4	.6 .3	.8 .1	.8 .1	FAVOR OPPOSE
Requiring utils. to lower offpeak rates	- -	- -	.7 .2	.6 .3	FAVOR OPPOSE
Is energy shortage real?	.6 .2	.5 .4	- -	.5 -	YES NO
Is energy shortage very serious?	-	.4	.5		YES

¹In-depth interviews by relatives and friends (called a "MILSTEIN" for Mother-in-Law Survey to Estimate Interview Noise) yielded quite different results from the telephone surveys by anonymous interviewers on many opinion questions. For example, people indicated much greater concern about the energy situation to a stranger on the phone than to a friend in the home. During home interviews with friends, people also expressed a more favorable attitude towards laws that would decrease energy use by providing incentives to individuals or even enforce requirements.

²Note that in reporting survey results here, only the first decimal place is given, or a fraction (e.g. one-third). The reason for this is the FEA validation study found measurement errors as large as +18 percent on opinion questions. Thus it would be incorrectly precise to report findings to the nearest percent.

Table 2
Attitudes During February 1977

<u>Proposal</u>	<u>Favor</u>	<u>Oppose</u>
Remove price regulations and allow the price of fuels to go up	0.2	0.7
Send limited supplies of fuels just to where they are most needed	.8	.1
Government pay part of cost of installing insulation or storm windows in people's homes	.5	.4
Government set conservation standards for new buildings and houses that builders must follow	.9	.1
Tax fuels to discourage their use	.2	.7

Table 3
Attitudes During March 1977

<u>Policy Issues</u>	<u>Agree</u>	<u>Disagree</u>	<u>Agree</u>	<u>Disagree</u>
Strictly enforce the 55 mph speed limit	0.8	0.2	Government should do something to help solve the energy problem	.9 .1
Give car buyers a tax rebate on cars that get very good gasoline mileage	.6	.4	Government should use TV, radio, and newspapers to inform people on ways to conserve	.9 .1
Make car buyers pay an extra tax of several hundred dollars on cars that get poor gasoline mileage	.4	.6	Not allow nuclear powerplants to be built until better safety standards are met	.6 .3
Would use vanpool if employer had one	.5	.3	Allow offshore drilling, even with pollution risk to water and beaches	.5 .4
Ration gasoline	.2	.7	Main reasons for recent natural gas shortage:	
Charge a tax for public parking so fewer people will drive alone	.2	.7		

Table 3 (con't)

	<u>Agree</u>	<u>Disagree</u>		<u>Agree</u>	<u>Disagree</u>
Increase taxes on heating fuels and gasoline	.1	.9	--Weather colder than expected	.3	
If you had to choose, which would you mind least:			--Natural gas companies withheld gas to get higher prices	.3	
Permanent gasoline rationing	.4	versus			
Paying 50 cents per gallon more	.4				
No medium or large cars sold	.5	versus	Government should investigate the oil and gas companies to make sure they do not hold back production	.9	.0
Paying 50 cents per gallon more	.4				
Require appliances to be more energy efficient, even if they cost more	.7	.2	Raising price of fuel is not fair, because rich people will use all they want anyway	.7	.3
Allow insulation charges one by utility companies to be deducted from income taxes	.7	.3	Consumers have the right to use as much energy as they want to and can afford to	.3	.7
Give tax rebates to people who install extra insulation, storm windows, or solar heaters	.6	.3	People should be allowed to drive their cars and heat their homes as much as they want to even if we all become dependent on foreign countries	.1	.8
Want utility company to insulate my attic and let me pay for it on time	.2	.6	Best way to get people to save energy is by:		
			--Passing and enforcing laws	.2	
			--Encouraging voluntary conservation	.7	

Following the President's speech to the American people on April 18, 1977, and his presentation of his energy policy message to the Congress on April 20, the Gallup Organization, Louis Harris and Associates, and The New York Times and CBS did telephone surveys of representative samples of the American public to determine their impressions and opinions regarding the energy situation. The following fractions of the public favored or opposed these energy policy proposals in April, 1977.

Table 4: Attitudes During April 1977

<u>Proposal</u>	<u>Favor</u>	<u>Oppose</u>	<u>Favor</u>	<u>Oppose</u>	
Gasoline tax	.4	.5	Encouraging cogeneration and taxing industries that use oil or natural gas	.7	.2
New car taxes and rebates	.6	.4			
Tax credit for home insulation	.9	.1	Offering lower electricity rates in offpeak hours	.7	.2
Tax credit for solar heating	.7	.2			
Rebates to consumers of new taxes paid on home heating oil	.6	.2	Encouraging construction of more nuclear powerplants	.6	.3
Taxing domestic crude oil to bring prices up to world price	.4	.5	Making industry use pollution-free coal	.8	.1
Raising natural gas prices to stimulate production	.3	.6	Increasing strip mining but also protecting environment	.8	.1

Following the President's April address,

- ° One-half of all the people think the energy shortage in the United States is very serious; one-third think it is only somewhat serious; one-twelfth think it is not at all serious.
- ° Six-tenths of the people think the energy shortage will be very serious in ten years.
- ° In early April, only four-tenths thought the energy situation to be a very serious problem; thus one-tenth changed during April. This growing conviction among the public that the energy situation is very serious is due as much to the general media coverage surrounding the energy message as to the President's talk itself. Regarding the situation as very serious is not significantly related to whether or not people actually saw the broadcast of the President's message to the people or to the Congress.
- ° One-half of the people saw the President's broadcast to the people; and three-fifths saw the President's presentation of the energy message to the Congress; only three-tenths did not see at least one of the speeches.

People prefer policies they perceive to be fair. Support for the energy policy proposals is less among those who feel they will be harder hit by the effects. For example,

- ° Four-tenths of those earning \$5,000 or less, five-tenths of those earning between \$5,000 and \$10,000, six-tenths of those earning from \$10,000 to \$20,000, and seven-tenths of those earning \$20,000 and over favor allowing the price of natural gas to go up.
- ° One-fourth of all the people believe they will have to bear more than their fair share of the burden of the new energy policies. Three-tenths believe that the burden of the energy programs will not fall more heavily on them compared to most other Americans.
- ° Two-fifths feel paying higher energy prices will be very difficult for them; two-fifths say it will be fairly difficult; one-fifth say that it would not be too difficult.
- ° Seven-tenths think that those who want big cars will pay the higher prices in spite of the taxes on big cars.

SUMMARY AND CONCLUSION

Throughout these data on public opinion, one can see that the policy proposals least preferred by a majority of consumers are those that hit closest to home. A majority of people do not want to pay more for the energy they use or more for the comforts, conveniences, and life styles which energy makes possible. Nor do people want to sacrifice their comforts, conveniences, or lifestyles and pay more for energy unless they perceive they are getting something of equal or greater value to themselves--like independence of foreign oil or assured supplies of energy. Until these things are salient to consumers and seen of equal or greater value than more familiar and personal comforts, people will prefer not to sacrifice or pay more for energy.

People do not want to pay higher prices for energy because higher energy prices are the energy problem to a majority of people. Higher energy prices are of great concern to people because they are personally experienced weekly and monthly through gasoline and utility bills. Thus people are baffled by proposals to solve the energy problem by raising energy prices to consumers: How can you solve high prices by making them even higher?

Most Americans are poorly informed about other important dimensions of the energy problem (flagging domestic production, dependence on foreign oil, etc.). Lacking knowledge about the nature of the energy problem, (even basic facts like our current need to import oil to meet current demands) and having great faith in technological solutions (that remove the perceived need to act oneself), a majority of people hope to get through the energy problem without making personal sacrifices. Thus, there is an enormous need for continuously educating the public about the nature of the energy problem, what consumers can do, and progress made to deal with the problem.

Aside from information and education, people also need to feel that measures taken to deal with the energy problem result in equitable sacrifices. Equity of sacrifices will help to remove doubts and skepticism about the reality of the energy problem. But, if they are to sacrifice, people need to be convinced that others are also making equal sacrifices, including oil companies, utilities, and automobile manufacturers.

People, whether individual consumers or corporations, have preferred that someone else sacrifice to solve the energy problem. Short-term self-interest and stakes in things as they are dictate such an attitude. But in the long-run and in reality, everyone has a stake in the National interest, for it directly affects personal and corporate interests. Until this reality is seen, accepted, and acted upon by everyone in this democracy, obtaining an acceptable and effective solution to this Nation's energy problem is unlikely.

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