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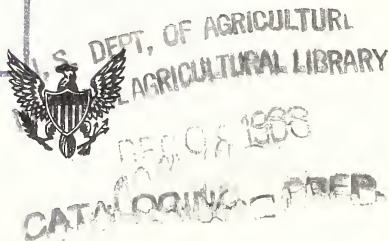
# 1977 U.S. AGRICULTURAL OUTLOOK

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## OUTLOOK FOR ENERGY

(By Jerry Ann Penno,\* Director, Office of Consumer Affairs/Special Impact,  
Federal Energy Administration)

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Thank you for inviting me to participate in your National Agriculture Outlook Conference and to speak to you about the outlook for energy. I would like to give you an overview of the energy supply and price situation and to outline new energy programs and legislation which are of particular interest to American families.

First, let me state that there *is* still an energy crisis. We in the Federal Government need your help in conveying that message, for as one who drives 55 miles an hour on an expressway knows, motorists are behaving as though conservation of gasoline were not important. Gasoline usage in mid-September averaged 3.9 percent over last year even though we are more vulnerable today to foreign energy actions than at any time in the past.

U.S. production of oil peaked in 1970 and has since been declining. Our consumption of foreign oil, on the other hand, has *risen* from 36 percent before the embargo to 40 percent this year. The bill for these imports has climbed from \$3 billion in 1970 to \$27 billion last year. Another sharp boost in world oil prices seems almost certain when the Organization of Petroleum Exporting Countries—the OPEC Cartel—meets in December. It is expected that the cost of foreign oil will rise to \$34 billion this year—an amount equal to almost \$160 for every man, woman and child in this Nation! Increased oil prices could mean unemployment, reduced consumer spending, and slower economic growth; and it could add as much as 2 cents per gallon to the pump price of gasoline.

The outlook for natural gas, the energy source used by over 50 percent of the industrial sector and by over half of residences for home heating, is not much better. Production of natural gas has declined by 13 percent since 1973. Proved reserves reported for 1975 are at the lowest figure in 24 years. Reserves, of course represent volumes of gas which are known to exist which can be produced. They are the Nation's most readily available supply of gas. The decline in reserves, coupled with the fact that we are adding less than half of what we are producing annually, gives rise for serious concern about whether we can satisfy essential demands for gas in the future.

Decreases in natural gas supplies have resulted in increased gas curtailments. In other words, gas pipeline companies and gas distribution companies are unable to satisfy customer demands for gas because of a lack of adequate supplies. In many parts of the country, short-

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\*The views expressed in this paper are those of the author and not necessarily those of the USDA.

ages of gas have forced gas companies to place a moratorium on new or additional gas service. This is most unfortunate at a time when the economy is recovering and housing construction is up. As a result, consumers in many places have had to turn to more expensive fuels, such as electricity.

The overall economic impact of these chronic gas shortages will depend on the weather for the coming winter, the capability of the curtailed users to switch to alternative fuels, and the ability of gas companies and other large consumers to avail themselves of measures to purchase emergency supplies of natural gas.

Depending on the severity of these factors, there is always the threat of production slow-downs or shut-downs. In addition, if a given industry is able to continue production by switching to an alternative fuel, the higher costs of conversion to these fuels will be passed along in higher costs of products to the consumer.

Turning now to coal, our coal reserves account for 90 percent of U.S. energy reserves—around three times the energy contained in Middle East oil reserves. Yet because oil and gas prices were so low in the past, and because environmental legislation has made it difficult to mine and burn coal as a fuel source, coal has accounted for only a small portion of our energy use, a large percentage being used by utilities. Increased use of coal will require new technology to mine it, to transport it, and to burn it with minimum harm to the environment. Costs associated with the increased production efforts and with pollution devices will increase the final cost of coal to the utility. This, of course, will result in increased electricity bills.

Incidentally, new legislation extends authority of the Federal Government to require oil and gas burning utility and industrial boilers to convert to coal where it is practical.

Increased costs associated with construction of nuclear power plants, as well as regulatory delays and uncertainty concerning the outcome of nuclear referendums in seven States, has resulted in cancellation and postponement of many plants. With inflation increasing costs daily, the ultimate cost of these plants will be many times the original estimates.

Although the initial cost of solar space heating and hot water systems is expensive, the systems offer substantial economic benefits over their lifetimes to residential users. The advantages, which become evident when considering lifetime costs, are not obvious to the potential consumer, however. Because these devices are new, the resale market has not yet had the opportunity to reflect their life cycle value in resale prices. Doubt over future resale values sometimes influences lending institutions. Lack of experience and lack of standards also make it difficult to obtain warranties. To help remedy this situation, Congress has passed new legislation which authorizes \$2.5 million for FEA in fiscal year 1977 to develop a national strategy to help commercialize solar energy. Mass production and increased markets for solar heating and cooling systems are needed to make the systems more reasonably priced and consequently more popular with consumers.

To help consumers get answers to their questions regarding solar energy, the Energy Research and Development Administration and the Department of Housing and Urban Development have contracted

with the Franklin Institute to operate the National Solar Heating and Cooling Information Center. Consumers anywhere in the United States who want information can call toll free (800) 573-2929 and speak to staff at the center.

The Federal Energy Administration and the Department of Health, Education, and Welfare will soon publish a book which will inform consumers about the basics they should know in order to decide whether or not to invest in solar heating systems. The book, "Buying Solar," explains the tradeoffs between different kinds of equipment and criteria to calculate the life cycle costs.

During the past year Congress passed three major pieces of energy legislation to help increase domestic energy production, to secure our position against any future embargo of foreign oil, and to increase energy conservation.

To help secure the Nation in the event of an embargo, we are building a strategic petroleum reserve of at least 150 million barrels of petroleum by 1978 and up to a billion barrels by 1982. We are establishing standby measures to deal with any severe emergency which may arise and are working with other nations to develop international cooperative contingency plans.

To help increase domestic supplies of oil, new legislation authorizes the full development of four naval petroleum reserves in the United States.

Price controls of crude oil will be gradually lifted and will be completely phased out by 1979 to aid oil producers with the costs of exploration and drilling. To aid consumers who have already been hurt by high oil prices and overall inflation, prices will rise only gradually so as not to cause severe economic strain.

Of utmost importance to consumers is the area of energy conservation. Several significant initiatives are now being begun which will save energy and money for consumers.

One of the main goals of our energy policy, and the one which is probably of most overall importance to consumers, is to reduce the rate of our energy growth from 3.4 percent to 2.5 percent per year. Many conservation measures taken to achieve this reduction will directly impact on consumers by helping them to save energy and therefore dollars. And, as industry finds better ways to conserve energy used in production, the savings will hopefully be reflected indirectly in cost savings of products and services for the end consumer—you.

Appliance manufacturers are now required to provide energy efficiency information on the labels of major appliances. The information will help consumers to make comparative judgments regarding initial cost versus operational costs of appliances. FEA is presently working with the National Bureau of Standards to develop testing procedures. A program to educate consumers on the use of energy labels is now being prepared and will be ready for implementation after basic decisions on the exact content of the labels are made. The Federal Energy Administration is working with the industry to set overall goals for better appliance efficiency.

Auto manufacturers are now producing new cars and light weight trucks which achieve improved gas mileage. Mandatory fuel economy standards require an average of 18 miles per gallon by 1978 and 20 miles per gallon by 1980. These standards will result in better designed



cars, more efficient engines, and savings for consumers. Auto dealers are also required to make available the "1977 Gas Mileage Guide for New Car Buyers" in their showrooms. The new guide, which is a joint effort of FEA and the Environmental Protection Agency, divides automobiles into different size classes according to their interior size in addition to showing the gasoline mileage achieved under test conditions. The interior volume index which is used is an estimate of vehicle interior size that is considered to be more meaningful to consumers than the traditional exterior measurements. All this information should help new car buyers to better compare the fuel economy of similar-size vehicles.

In addition, all new 1977 and later model cars and light trucks will carry a label disclosing the fuel economy, the average fuel cost of operating the vehicle and the range of fuel economies of the cars in its class.

New programs leading to energy savings for homeowners are also being developed as a result of legislative action, the Secretary of the Department of Housing and Urban Development must develop standards for energy efficiency in new residential and commercial buildings within 3 years. States are required to adopt thermal building standards within one year. Construction costs as they relate to energy savings will be considered in developing all standards. The new homes should save consumers many dollars in their fuel bills.

Let me now turn to an area of particular concern to me and to my office—the energy problems of those with low and fixed incomes. These people have suffered the most from high fuel prices. After cutting back their energy use as far as possible they have sometimes had to choose between heating their homes and other necessities, even food. Their homes are often the least likely to be well insulated and they cannot afford to remedy the situation.

Our office has been working with representatives of Federal Human Resource Agencies to come up with solutions to this difficult problem. A version of model legislation drafted by this group was recently passed by Congress. The resulting Weatherization Assistance Program will help low-income persons by insulating over a million residences of low- and fixed-income people.

FEA will make grants to States which may in turn allocate the funds among local governments and community action agencies to administer the program. All low-income households will be eligible to receive weatherization assistance. The determination of which residences to insulate will be made by the State or local agency administering the program.

Under the program, \$55 million is authorized for fiscal year 1977, \$65 million for fiscal year 1978 and \$80 million for fiscal year 1979. At least 90 percent of the funds must be spent on weatherization materials such as ceiling insulation, caulking, weatherstripping and storm windows, as opposed to administrative costs.

The high cost of utility bills, of course, has been an increasing if not the major energy concern of *all* consumers. Besides the high cost of fuel which has been passed on to consumers in their bills, the cost of construction of new plants as well as the daily costs of management have increased with inflation. These costs are often reflected in a higher rate base. As you can see, the utility companies as well as consumers are having problems because of the higher costs, they are

required by law to deliver electricity on demand but are finding it increasingly difficult to raise the capital necessary to construct new plants needed to generate electricity during high demand periods.

FEA has funded a number of utility rate demonstrations in an effort to find solutions to these problems which will be equitable to both consumers and utilities. The majority of these projects are testing the pros and cons of peak load pricing, a rate system which would charge consumers rates for electricity based on the time when it is used. The system is similar to that of the phone company which charges less for long distance calls made after 6:00.

It is hoped that a peak load pricing system could reduce the need for new plants and equipment by spreading out the demand for electricity throughout the day. At the present time, demand for electricity is usually centered around certain times such as dinner time, prime television time and, of course, when there is extremely warm weather. The rest of the time expensive equipment required to meet the demand for electricity at these peak times lies idle. Consumers nevertheless must pay for the purchase and maintenance of this equipment. Peak load pricing would provide households with an opportunity to save money on their utility bills by changing consumption patterns of electricity. Conceivably families which would do their dishes and laundry at off peak hours—late at night or early in the morning—could save money.

Another demonstration program is testing the pros and cons of a lifeline rate. This rate would charge consumers who qualify and who use a certain minimum amount of energy a special low rate. Those who use more than the minimum would be charged at an increasing rate for that which is used above the minimum. Present rate structures usually charge less for electricity used above a certain amount.

It has been anticipated that this lifeline rate could be an aid to low-income consumers who usually use less electricity and who are having an especially hard time paying their utility bills.

Recently Congress authorized \$13 million for additional utility rate demonstration projects.

Finally, I would like to share with you some encouraging information regarding what can be achieved when a serious all-out effort is made to conserve energy. You may be surprised at the source of my example. Consumers have told me as I travel around the country that the Government should set an example for energy conservation. Under the Federal Energy Management Program which was established in 1973, the Government is doing just that. In 1974, energy consumption by the Federal Government was reduced by 24 percent and the savings are being maintained each year. The new legislation tightens mandatory conservation standards for Federal agencies to even further improve the energy practices of the Federal Government.

It is expected that a 10-year program will result in zero energy growth for the entire Federal Government. This saves money for the Government and therefore for the taxpayers as well.

New legislation provides for grants to the States to help them achieve similar levels of energy conservation. State plans include resources to promote the availability and use of car pools, van pools, and public transportation; mandatory lighting efficiency standards for non-Federal public buildings; mandatory thermal efficiency standards



and insulation requirements for new and renovated non-Federal buildings; mandatory standards and policies relating to energy efficiency to govern the procurrent practices of a State and its political subdivisions; traffic laws or regulations permitting motor vehicles to turn right at a red light after stopping.

In addition, State programs will include expanded public education efforts to implement energy conservation measures.

At the Federal level the Federal Energy Administration has been actively working to develop consumer information and has produced three films especially for use with consumer audiences. "When the Circuit Breaks," 27½ minutes, explains the reasons for the energy problem and some resource development and conservation measures needed to solve it. "Don't Cut Us Off," 16 minutes, shows what four American communities have done to ease the energy budget problems of low-income and elderly citizens. "Up The Power Curve," 10 minutes, gives energy conservation tips which all people can practice. The movies are available for free from Modern Talking Pictures, New Hyde Park, New York.

All these programs are only a beginning. I am happy that I have had this opportunity to talk to you about our energy problems and some of the solutions to those problems. I hope you will spread the word. An effective energy policy can be developed only with the support of all citizens. The Nation can no longer afford the spendthrift energy values of the cheap energy days. Those days are over.

As home economists concerned with the changing values of society and the family, I hope you will help us to convince everyone of the need for a conservation ethic and I hope we can work together in producing and distributing information on how to achieve this necessary goal.