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## VOLUNTEERS IN ENERGY CONSERVATION - POTENTIAL AND PROBLEMS

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### Abstract

The social and political implications of the energy crisis, while complex in nature and understanding, seem to urgently proclaim that the time for action is now. This paper is based on the premise that individual responsibility is essential. The people must act. Political decisions must be made. The people must debate what social climates are to be promoted and by what new energy systems. The key to solving the energy crisis is America's people, and particularly with its youth. With people come the potential and of course, the problems. The approach of this paper will be threefold:

#### I. INTRODUCTION: ENERGY CRISIS - THE INVISIBLE CRISIS

Walter Cronkite, CBS News, August 31, 1977, has aptly called the energy crisis the "invisible crisis." He says, "By the time we see it, it may be too late." The purpose of this paper will be to make the energy crisis visible and understandable.

It will call attention to the reality of the energy crisis from a laymans viewpoint in order to create a common motivation for change. Change can take place only when the social and political considerations are perceived and acted upon. The values involved in change have to do with the broader implications for lifestyle and philosophical meaning.

#### II. INFORMATION: WHERE DO WE GO FROM HERE?

Many times higher education takes for granted that research and development of energy conservation programs are the ends in themselves. The gap between information and actualization will be identified and positive models for filling this gap will be identified or suggested.

The President stressed on April 18, 1977, "This difficult effort will be 'the moral equivalent of war' - except that we will be uniting our efforts to build and not destroy." The process of organizing America to meet the energy crisis does not have to be grim. Rather, it is an exciting challenge.

#### III. INITIATION: VOLUNTEERISM: HOW TO ENCOURAGE THE PEOPLE TO ACT?

Discussion will range from practical ways of sustaining effective involvement of volunteers to analysis of ongoing programs already producing change in the energy crisis. Self-indulgence has been blamed for the nations current energy crisis. Perhaps, a more important cause has to do with the lack of tough planning of growth and energy planning. In either case, the time for action is now. And the greatest arena for action can be found in the volunteer sector. Local churches, youth groups, and other community organizations can get involved.

Volunteer efforts of several states will be described. An overview of the Bolton Institute, Washington, D.C., will be made as an effective model for action. And the implications of the President's Energy Plan on Volunteerism

will be clarified.

Hopefully, a plan to help initiate discussion on the role of volunteerism in groups and agencies such as the Missouri Volunteer Office, the Missouri Department of Natural Resources, and the Missouri Council of Churches, will be developed as a statewide effort. How to act responsibly in our utilization of energy conservation is the question. From the complex social and political implications of the energy crisis there can be an opportunity for the development of a more caring and concerned society.

#### 1. MAKING THE ENERGY CRISIS VISIBLE

The first challenge for us today would seem to make the energy crisis visible for all to see realistically. Walter Cronkite, perhaps the best known television reporter in the U.S., presented a special report on August 31, 1977, titled, "Energy - The Facts, Fears, and Future." I believe the following statement bears repeating:

"The Carter Energy Plan is a controversial first step. But only a first step to change that. The findings of the CBS News team suggests that more needs to be done. The Carter plan is not likely to meet its stated goals. It is unlikely to reduce oil imports by the huge amounts called for: its extremely unlikely to produce as much coal as planned; its certain that nuclear power will not be able to fill the gap after 1985, when supplies of natural gas and oil begin running down; and there is no real promise that the rate at which we increase our use of energy will be cut in half. Perhaps, it is unrealistic to expect the first step to be a giant one. The President may have bitten more than the people are ready to chew as it is. We've seen there's a pervasive cynicism among the people, a feeling that all the talk is a cover for a rip-off of the public. Well, there are some interesting statistics. The industries are doing very well, thank you. But our findings are that the energy problem is real, not a rip-off. Perhaps, the hardest problem has is to persuade the American people of just that. Except in war or some other visible calamity, we are not very good as a nation at tough planning or making sacrifices. But it is clear that some sacrifices must be made; higher taxes, higher prices, lower consumption, or a combination of all three. What we are facing, if we don't act now is a bleak world

some years in the future. Black outs, rationing, mass unemployment, a drastic worsening of our lifestyle. The problem is that energy is that invisible crisis. By the time we see it, it could be too late."

The hardest job is to convince the American people! People don't want to know the bad news and so far, no one wants to tell them. The basic problem then is making the energy crisis real. Volunteerism can be one way to get people involved and develop energy awareness. The key to any national energy policy is an involved American public.

The energy crisis can provide an opportunity for developing concerned people. By learning ways of conserving energy and emphasizing stewardship values each person can contribute to societal and political solutions. There is a potential for persons to learn the importance individual responsibility. The Missouri Volunteer slogan raises the question correctly. "If you don't care, who will."

In the special edition of Newsweek dedicated to "How to Save Energy," April 18, 1977, a New Perspective is identified. Conservation is suggested to be a most important immediate solution. "A barrel saved is as good as a barrel produced," goes the conservationist's maxim, and these days, a barrel saved may even be better! Conservation will be very helpful for the immediate future. New ways of trimming energy waste are necessary to encourage. The Administration planners insist that the U.S. could use less and cut energy growth to two percent or less a year. Industry has already developed energy conservation programs. For example, Newsweek says Carbide cut its energy use by 6 percent - the

result of 1,900 separate conservation projects. And the payoff will be a fuel bill \$40 million less than it would have been without these conservation measures (pages 73-74). The problem is that the American public continues to use more and more energy today.

In Missouri, Wes Fisher, director of the Missouri Energy Agency, reports that a volunteer program to help industry and government cut energy use probably has been the agencies most successful program. The Missouri Program is modeled after one begun in Minnesota. The Missouri Municipal League, which brought it to the attention of communities throughout the state, called it "one of the most effective, innovative and extensive efforts undertaken in the country, not only assisting municipal governments, but also in assisting schools, institutions, and small-medium industries." Fisher says that about 428 requests for help have been made to the Missouri Energy Agency and about 50 had been handled. The results can be measured as very successful in several projects.

The real problem then lies with educating the general public to the reality of the energy crisis. Only when the people come to this realization will dramatic changes take place. Lt. Governor William Phelps, in his Banquet Address to the Fourth Annual U.M.R. Conference on Energy (10-12-77) pointed out that difficult issues must be debated by the people before the government will be able to develop an adequate energy policy. Such debate, which is controversial for sure, will enable the people to clearly see the implications of the energy crisis. The people are going to have to see the dilemmas. If the political processes are responsible such debate will cause action. Positive action can provide cooperation for a good future. And without this debate of political action it would seem that only disruptions in energy which hurt people will make visible the energy limitations.

## 2. "INFORMATION - AN INFORMED PEOPLE"

The theme of this conference is "Where do we go from here." So it is with this paper. Once the energy crisis is made visible how are solutions produced that provide lasting change. Before any solution is developed, information must be well studied and of course, communicated to the people. Often times, there is an information gap and the results are demoralizing. The 55 mile per hour federal law is a good example.

Brook Adams, secretary of the federal Department of Transportation, said on October 4th, that Missouri had one of the worst records of enforcing the 55 mile an hour speed limit. A recent survey showed that 75 percent of the vehicles in Missouri were exceeding the limit. Obviously, this survey points out that even with a law 75 percent of Missouri's people are not complying with this effort to conserve gasoline.

One might ask then, "if laws aren't effective in helping conserve fuel, how can we expect people to volunteer on their own initiative?" This question does identify the reality of the limitations of volunteerism. It also identifies an evident flaw in man's behavior and moral judgment in regards to the energy crisis.

In response to this problem Governor Teasdale, Gerald Ortvals, an aide, and Maj. Paul Volkmer of the Highway Patrol issued a series of statements. Gov. Teasdale said the federal government should start a nationwide program to promote voluntary public acceptance of the 55 mile per hour speed limit. In essence, there has been such a program for two years. Ortvals said, "We're trying to enforce the enforceable, we need a campaign for voluntary compliance." He went on to say that the use of citizens' ban radios and radar detectors by the public to circumvent the law tells us people aren't persuaded voluntary compliance is worthwhile thing.

Maj. Volkmer responded to Missouri's high non-compliance record by saying it is necessary to establish a feeling of credibility on the part

of the public that the limit (55 miles per hour) is contributing to the relief pressures from the energy crisis.

In closing, Ortvals said, "We'll cooperate in any way we can if they (Federal Government) will give us specific information."

Information is critical. We do need an enlarged campaign for voluntary involvement! People must understand the problem and be informed of solutions that are practical and economical. Many times the information gap paralyzes any active solution and causes fear and mistrust. The goal then really is education - how to inform the people.

The Department of Housing and Urban Development has prepared a document on "Residential Energy Conservation." (H-1654-July, 1974) It states that the energy which we use in our homes accounts for approximately one fifth of our total national energy consumption. In 1973 this was equivalent to six million barrels of crude oil daily. It points out that unless it is brought to our attention we seldom stop to consider the wide variety of ways we consume energy. The problem is further complicated by the fact that dwelling units take a variety of forms. The problems is often getting the information so that you know where energy is wasted and then how it can be saved. Information is crucial. (Page 1)

### 3. "INITIATION - VOLUNTEERISM"

When the energy crisis is visible, and when there is adequate information for understanding; then, there can be initiation. Solutions can be actualized. Volunteerism can provide a rich resource base for programs toward energy conservation. There are many examples of the potential for people to commit themselves to conservation programs.

The Community Services Administration has written a booklet, titled "A Community Planning Guide to Weatherization." This is a very helpful handbook as it clarifies the basic problems, the purpose of the program, and an unique project design

with a helpful technical information.

CSA speaks out boldly concerning the social and political implications of the energy crisis. It suggests that the decade of the 1970's will be remembered as the one in which we realized that we could not continue our mindless destruction of the environment in which we live, polluting its waters and atmosphere, exhausting its supply of fossil fuels. Needless to say, whatever the impact of this realization, the cost and availability of energy during the next twenty-five years will have a more profound effect on our economy, our government, and our lives. And as usual the poor are the first to suffer.

Home winterization for the poor is perhaps the most crucial step for us to take. The CSA has just begun to sponsor such efforts in the Missouri area in cooperation with the Missouri Department of Natural Resources. University students and Volunteers in Service to America at the University of Missouri-Rolla, have a good record of home winterization for the poor elderly. Nearly 100 homes have been winterized in the last two years. This program has been sponsored by the United Ministries in Higher Education. This is an excellent example of how the church's campus ministry has been able to meet the energy crisis with a special ministry to the poor and elderly who are suffering the most. Many more programs such as this local effort need to be pioneered by volunteer groups of citizens across our country.

This Home Winterization model is urgently needed around our county. Its potential is great if volunteers can be channeled into local efforts. Surely, the church, higher education, and governmental agencies can begin to work together. The better the job is done the more all people will be able to live a healthy life.

Reducing the growth rate in energy demand through conservation was one of the FEA's primary concerns. Formerly Volunteer programs on automobile fuel efficiency standards and labeling programs,

were mandated by Congress as part of the Energy Policy and Conservation Act (EPCA), signed into law December 1975. The 1976 Gas Mileage Guide for New Car Buyers showed a 26.6 percent full economy improvement for 1976 model cars over 1974 models. This legislation has been successful even though the car industry is failing to meet the 1978 model requirements.

The FEA has also started an Utilities Conservation Action Now (UCAN) program involving electric and gas utilities and regulatory agencies. Another effort of the FEA has been to coordinate federal decision making with state and local, public and private institutions. With the new cabinet level Energy Department it is hopeful that this coordination will be more effective at all levels.

The Annual Report of the Federal Energy Administration 1975/1976 points to significant and positive energy accomplishments. 1975 was the year that marked the passage of the first comprehensive national legislation on energy. As the Federal agency responsible for national energy policy, FEA began to provide the most up-to-date information gathering, data base, and energy policy analysis. FEA is continuing to improve the Federal Government's ability to forecast and evaluate alternative energy futures and provide detailed analysis for government, industry, and public use. The National Energy Outlook does provide valuable information. (Page 11)

Another model for volunteers in Energy Conservation has been developed by the FEA for institutions of higher education. This effort is called a Campus Energy Management Program. It must be noted that many institutions of higher education, public and private, have suffered fiscal breakdown. Many such institutions have had to close their doors to students directly because of the economic impact of the energy crisis. Even the more stable institutions have been caught with new problems in their maintenance and operation policies.

The Campus Energy Management Program has identified a valid model which can be seen in the following outline:

- I. Establish Objectives
  - (1) Energy Conservation Committee needed
  - (2) Commitment needed
  - (3) Decisions made
  - (4) Motivation developed
  - (5) Direction forecast
- II. Direct the Attainment of Objectives
  - (1) Energy Management Officer
  - (2) Energy use and cost information
  - (3) Plan
  - (4) Gather information
  - (5) Synthesize information
- III. Measure Results
- IV. Promote Innovation
- V. Develop People

At the University of Missouri-Columbia, for example, a seasonal conservation program was developed. This program enabled UMC in two heating seasons to avoid spending \$288,000 for steam and \$415,000 for electric power, and in one cooling season UMC avoided spending \$170,000 for steam and \$152,000 for electric power. When measured by the economic factors alone, this program of Campus Energy Management has tremendous potential.

The Bolton Institute, Washington, D.C., has an excellent record in promoting energy conservation programs. As a private institute that is supported by private funds and federal grants, Bolton exists to help young people and adults better understand the need to achieve a mutually supportive balance between the life sustaining capacities of nature and the requirements of people. It also endeavors to promote constructive cooperation across vested interests and disciplines to enhance the quality of life and the achievement of balance. It seeks to establish base lines of information and understanding about environmental quality relevant to human concerns; e.g., energy, economics, technologies, and natural resources.

Furthermore, the philosophical, social, and political issues are identified in the following statements:

"The complexities of human needs and the impact of various environmental solutions are generating increased tensions, and difficult trade-offs are involved. Serious concern about employment and resources has caused many to believe that environmental matters must take a back seat.

The human tendency to compartmentalize one issue from another, a specific issue from an overall perspective, or one form of expertise from another, has created a win-lose perception of environmental protection. Yet, we believe that if any special interest prevails, we all lose. For ultimately, all people are dependent on the sustaining capacity of the earth and therefore, upon the goodwill of their neighbors.

To fail to achieve a balance between the requirements of nature and people degrades the dignity of our species, pre-empts the rights of other species, and prevents the healthful existence of generations yet unborn. Spaceship Earth is our only village in the Universe. This is why we exist!"

The Bolton Institute and the Federal Energy Administration have developed a Youth Energy Conservation Training Program (ECYTP) that has three primary goals. They are 1) to reduce the use of finite sources of fossil fuels; 2) to help youth develop an energy conservation ethic; and 3) to help youth initiate action programs to conserve energy. Seven states have received this program and have reported significant progress as described in the National Energy Inquirer, August 1976.

The program began by conducting a training event for 30 adults in each of the seven states. These adults will receive training from the Bolton Institute and will then be able to start an ECYTP in the state.

On page nine of the National Energy Inquirer, this program is described in detail and it merits

consideration in detail by this writer as a possible model for Missouri. I believe that the greatest potential for America is its youth.

The FEA/Bolton Institute program was designed for young people, their teachers, club leaders, and parents. The major goals of the energy conservation program are:

To help people believe in and understand the energy crisis;

To inspire people to develop a personal energy conservation ethic;

To give people an information base by which they can work with families in the home to reduce fossil fuel (coal, oil, gas) use, thereby reducing utility bills;

To provide high school students with a leadership role which can successfully inspire their peers and younger people to conserve energy;

To develop programs and activities in cooperation with teachers and youth leaders for presentation in junior high schools, the upper elementary grades, and the youth groups on the same age levels; and

To work in the community at the invitation of civic, business, or industry groups, or on self-initiated projects.

The program was conceived to provide a participating state with program self sufficiency by establishing each state with an in-state implementation mechanism, trained persons, support and information networks, and actual workshop and resource materials. The project was also designed to provide each state with a program which could reflect local energy needs and limitations within each state.

The program emphasized the importance of youth in solving our energy problems. In addition, it encouraged state and local governments, business, industry, civic, and youth groups to confront their energy problems from a local perspective and in cooperation with youth.

The program's scope included: establishing a state coordinating mechanism; establishing a Resource Mobilization Council; training thirty trainers for a state-wide program; conducting a one-day demonstration workshop for youth participants; and providing a groundwork of program materials for state use.

As the primary objective of the Energy Conservation Youth Training Program is to reduce all forms of energy consumption in homes, schools, and communities nationwide, it focuses on home and school energy-saving activities most likely to produce dramatic and demonstrable results, specifically:

Reduction of heat loss of upgrading insulation, storm windows and doors, weatherstripping and caulking.

Reduction of energy consumption through thermostatic regulation of water heaters, heating and cooling systems, and wise use of washers and dryers, refrigerators, ranges, and other home appliances.

The basic approach of the program is to involve entire families, the school system, and community, in making calculations to answer the following questions:

- (1) How much energy is being lost or wasted each month (with particular reference to ceiling and window areas and to thermostatic settings)?
- (2) How much is being paid each month for this lost or wasted energy?
- (3) How much would it cost to install energy conserving devices to reduce this monetary loss?
- (4) How long would it take the monetary savings thus achieved to amortize the cost of the energy-saving devices?

In order to reinforce the major program objectives for the seven participating states, and to provide a sequential outline of events for non-participants who wish to implement the program in their respective states, the Bolton Institute provides

the following review of the program action plan:

- (1) Conduct workshops throughout the state in such numbers and locations as to make one workshop reasonably accessible to every high school and all youth groups in the state. Every public and private high school principal or youth organization leader in the state will receive an invitation to send a team of one teacher and two students members to the nearest workshop. Each workshop can serve about 50 schools and/or youth groups.
- (2) At the workshop, youth/adult teams will discuss:
  - a. The fact that there is an energy problem and background of our national energy problem.
  - b. The long-term energy problem, with emphasis on state and local realities.
  - c. The personal stake of every citizen in promoting energy conservation.
  - d. Current approaches to energy conservation.
  - e. Key energy-conservation concepts.
  - f. The proposed role of the Energy Conservation Youth Training Program.
  - g. Ways of publicizing the program in their schools/clubs.
  - h. Ways of recruiting high school volunteers for the program.
  - i. Training program for motivating and preparing high school volunteers to go into elementary school classes, grades 4 through 8, with an energy conservation action program. (Each high school will serve its feeder schools.)
  - j. Methods of establishing and maintaining contact with teachers of grades 4 through 8 in feeder schools to be visited by program volunteers.
  - k. Follow-up program for reporting and evaluating project results.
  - l. Participation incentives at all levels

- m. Other energy-conservation programs in which program volunteers might participate.
- (3) Back in their own schools, teams will organize to cover all feeder schools, grades 4 through 8.
- (4) Trained high school volunteers will go to prearranged classes or clubs with activities and materials designed to generate enthusiasm for energy conservation, help others understand basic principles of energy conservation as they apply to their own lives, and involve them in energy conserving activities in their own homes. Key to this effort will be a home inventory in two parts:
  - a. A set of problems to calculate levels of energy consumption and heat loss in the pupil's own home, the dollar cost to the family of wasted energy, the cost of installing insulation or other energy-conserving devices, and the time it will take for dollar savings achieved to amortize the costs of installation.
  - b. A checklist to outline the pattern of family energy use and to show where savings can be made through conserving practices (such as turning down the thermostat in winter and switching off unused lights).
- (5) Students will take home their energy inventories, complete the checklist, and solve the assigned problems, using measurements they take themselves. Hopefully, parents and other family members will become involved in making these measurements and calculations.
- (6) Students will bring their completed inventories to their class or club and meet again with their student instructors, who will review the forms and problems encountered in preparing them, help them to interpret results in terms

- of additional steps they might take at home to conserve energy, and provide a listing of local retailers of insulating materials and other energy-conserving devices, together with current unit prices, to be taken home to parents for their convenience and consideration.
- (7) Students will meet at least one more time with their student instructors to report on what actually happened at home as a result of the program's energy inventory. A few weeks after the survey, they will meet again to discuss longer-term results.
- (8) High school student instructors will report inventory results to their faculty advisers, who will arrange to tabulate the results and report them to the program staff. The program staff will collate all reports and publish aggregate figures for distribution to sponsors, participants, and other interested persons or organizations.
- (9) The state coordinator will provide guidance, contacts, and technical assistance for students, teachers, and leaders engaged in energy conservation projects not directly related to the home inventory effort, particularly when such projects involve cooperation with existing public and private agencies having energy-conservation concerns, and when project results can be measured and reported in terms of actual energy savings.

Can this program become a model for Missouri? Surely, its possibilities are good if a volunteer effort can be coordinated from a state to local level. Groups that could consider such an effort as the Energy Conservation Youth Training Program are the Missouri Volunteer Office, the Missouri Council of Churches, and the Department of Natural Resources. From the complex social and political implications of the energy

crisis there can be an opportunity for the development of a more caring and concerned society as we see the crisis, gain information, and initiate action programs using our youth.