

# extension and the energy crisis: players or spectators?

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Stephen M. Born

Energy now heads the American problem agenda. It has become a pervasive and sometimes overriding consideration in economic development, international trade, defense, transportation, housing, environment, social services, and most other major issues facing our nation today. An issue of such complexity and importance can't help but be high on our educational agenda as well . . . and, of course, it is.

But education "about" the energy problem is a formidable challenge. The "facts-situation" is confusing and sharply disputed. Once we go past such global-like goals as "conserve more, produce more, switch to more plentiful or renewable energy sources, and be fair," there are sharp divisions in the scientific, intellectual, and policy-making communities regarding desirable, specific end-states and the means of accomplishment.

National and state polls clearly indicate that the public questions whether there really is an energy problem. With regard to energy, citizens aren't only suspicious of government and industry collusion, consumer "ripoffs," and the like, but are frequently able to point to examples reinforcing their skepticism.

## What Can Be Done?

Faced with an enormously complicated subject and a highly dubious clientele, what can universities and their Extension Services do?

### *Continue Mission*

There's no guaranteed prescription, but there are steps Extension can take to enhance the way our society understands and comes to grips with the energy dilemma. *First*, we must continue most of our historical missions—research

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and demonstration, education, and service work—and find effective ways to transfer successes to energy-related activities.

*Find New Educational Ways*

*Second*, new educational approaches are called for. Many Extension education efforts have relied on traditional approaches using communication skills to achieve changes in attitudes, values, and goals. The sobering conclusions of social scientists—that there's little evidence that attitudes can be predictably changed by cognitive appeals, or that even if changed, they'll have any predictable influence on behavior<sup>1</sup>—suggest that we may need to rethink and possibly add to our approaches.

Our concerns for objectivity shouldn't dissuade us from seeking innovative ways to affect both attitudes and behavior with regard to such goals as energy conservation.

*Strengthen Relationships*

*Third*, Extension education and its practitioners need to develop and/or strengthen relationships with government and other policy makers or influentials to get a clearer picture of needs and issues and to objectively conduct educational activities associated with the development of agency programs. In some cases, this will mean new or expanded clientele for Extension; in other cases it may mean healing historical cleavages between Extension institutions and state governments.

*Define Role*

A *fourth* step for Extension is to define more clearly the role of Extension in the large, varied, and sometimes overlapping field of actors. Unlike Cooperative Extension's relatively clear role in agriculture, the energy field involves community action agencies, citizen consumer and environmental groups, utilities and industries, governments, and many other educational institutions. We can ill afford to dissipate our educational resources.

**Problem-Solving "Tool Kit"**

*Technical*

Education is but one way of trying to influence our present energy situation. The application of science and technology offers significant potential for changing our energy situation, by changing the nature of our environment and forcing a change in our behavior.

*Economic*

Economists have argued assiduously for greater reliance on market forces as a means for implementing energy conservation and increasing production. The use of pricing signals to influence energy choices is an effective means for implementing energy policy.

*Regulatory* Government regulation is another means for forcing behavioral change. Federal and state legislation establishing the 55 mph speed limit and the U.S. Senate's preference for a ban on gas-guzzling cars (versus a pricing approach) are examples of the regulatory "fix."

*Education* All of the above "fixes"—technical, economic, and regulatory—have educational aspects. Technology transfer and the diffusion of innovations, via Extension education, is as appropriate for accelerating solar applications as for extending new agronomic or conservation practices. The rebellious response of electricity and natural gas consumers to spiraling rate increases, even where justified and necessary, suggests an immediate need for consumer education and understanding. And regulations lacking constituent support and understanding have proven difficult and often impossible to enforce. Special educational efforts have often been an intimate part of implementing sanitary ordinances and land-use controls and appear to have a place in implementing energy regulatory programs such as energy conserving building codes.

In short, I contend that attacking our energy problem will require the intelligent and complementary application of *all* our tools for influencing and bringing about change. Of course, education is an approach *in its own right*, as well as an inherent component of other strategies.

Having said this, I think it's essential that Extension educators continually assess the efficacy of their endeavors. Increasingly, Extension education activities across the nation are getting involved with energy conservation, an objective for which there's near consensus. Many of these activities have tried to apply the "cognitive fix."

The cognitive fix views man as a rational, consistent actor who will modify his internally controlled behavior on the basis of new information. The cognitive fix always involves the transfer of information, often under the rubric of educational programs . . . that try to modify beliefs, attitudes, values or motivation.<sup>2</sup>

As social psychologists have noted, the cognitive approach has great appeal. It ideologically fits our society where individuals are seen as responsible for their own fate. Making information available to them is consistent with notions of free choice. But this approach doesn't work very well because it's difficult to change an individual's beliefs or attitudes simply by information transfer. And, even if beliefs are modified, there's little reason to believe that changes in behavior will

follow.<sup>3</sup> If this is the case, we must adjust our educational focus and method.

I'm not arguing for the abandonment of Extension education programs oriented towards information transfer. I am saying that we must know the characteristics, capabilities, and limitations of that approach to use it effectively. We must be constantly aware of the relative importance of "pure" information versus other factors in making public policy decisions and in bringing about change. While cognitive methods of Extension education may be relevant, they may be insufficient.

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If we really want to identify meaningful and effective roles for education in addressing our nation's energy problems, we need to seek out more active Extension roles in the energy area, just as the county "ag agent" has sought them out in agriculture following the pattern of Seaman A. Knapp, whose result demonstration idea pioneered a new kind of education.<sup>4</sup> We can't be passive performers; we must get "into the trenches." And if Extension institutions fail to perform this role, the need for change in attacking our energy problems will ensure that this role will be filled by someone, perhaps far less suited to the task.

### **Some Roles for Extension**

#### *Access to the Milieu*

In the process of defining an Extension education role, it's essential that we thoroughly and candidly assess the milieu within which we function. This starts with a knowledge of the other actors, their roles, concerns, and capabilities. The energy arena is a crowded one, and Extension organizations are commonly either "first arrivals" in the arena or holders of the strongest credentials.

The fact that only one (and possibly a second) Extension organization emerged as the principal program manager among the 10 pilot Energy Extension Service (EES) grants<sup>5</sup> (a program that seemingly was designed for an Extension delivery system) should stir some thoughtful introspection. Units of the Department of Energy, state governmental energy and other agencies, regional institutions, and others are becoming significant participants and program designers in providing

education. Extension educators must aggressively seek linkages to these institutions, as well as relate the noneducational tools we talked about earlier for influencing change in our energy situation, if they wish to be something more than growling spectators.

We need to do some of the program development homework in energy that we have done in other areas. In the totality of the energy problem, where or what are the real needs and who are the potential clients? What existing or new resources can Extension bring to bear? In what areas can Extension, working in concert with other actors, make the greatest net contribution? In what areas does Extension have a unique leadership role?

*General  
Education*

Subject to all the above caveats, there are clearly some exciting roles for Extension energy-related education. In the area of general education, there's much to be done. We need to find novel ways of placing the long- and short-range energy issues in perspective, as a series of tough choices not divorced from values. These approaches must be designed to help shape informed debate, leading to positive action. Passive description of "the energy situation" won't suffice.

Some unusual adult education opportunities are invariably presented by "hot" local issues . . . a potential nuclear plant or nuclear disposal facility siting; another round of rate increases for the utilities; a controversial transportation proposal. We need to educate where the "action" is . . . to seek out conflict . . . and to acknowledge "up front" that we deal with political and economic ideologies and with equity questions. Initiatives like the Michigan State Cooperative Extension Service's, which focused on youth education, provide evidence that experimentation and assessment of general educational approaches can lead to change.

*Specialized  
Education*

The energy issue lends itself well to new audiences and new forms of specialized continuing education. In the functional area of energy conservation, new ways of using energy audits as educational vehicles or "access homes" for workshops are already being tested. Whole new, often nontraditional client groups (small businessmen, urban low-income renters, hospital managers) have suddenly become visible.

*Problem-  
Focused  
Education*

Problem-focused education, especially using energy demonstration projects that show how to do it by example, is another opportunity area in which Extension organizations can build on experience, past successes, and demonstrated strengths.

The energy "crisis" has heaped new responsibilities on governmental agencies and personnel. In many instances, these engineers, planners, administrators, operating staff, and key decision makers are poorly equipped for their new roles. Helping these governmental entities to build capacity via a wide variety of professional improvement programs opens up whole new clienteles for Extension. It offers the opportunity to help influence governmental programs and decisions, while getting continual feedback on the realities and progress of efforts to create change.

### **The Wisconsin Idea**

Historically, Wisconsin has had a political and geographical intertwining of the state and the university, including an extensive sharing of university talent in the affairs of state government. Many faculty, on leave from the university, have served and are serving as senior state administrators at the cabinet and subcabinet levels. In Wisconsin, there's both a tradition of university-government interaction and a unified Extension organization that's responsive and adaptive to programming in new areas.

In the years before the creation of our new Energy Extension Service, Extension had established an array of significant energy-related programs. These ranged from "public policy" educational programs on energy problems and issues for business, agriculture, labor, industry, various professions, households, schools, and government to an extensive professional energy training program offered by the largest Engineering Extension program in the nation. A wide-ranging menu of energy-related programs was also offered by county agents and faculty involvement with governmental energy matters was commonplace. Indeed, Extension submitted an unsolicited proposal for an "Energy Action Service" to the former Energy Research and Development Administration (ERDA) more than a year before the EES program came into existence. Many elements of that proposal were incorporated into the national EES model.

Accordingly, it was entirely appropriate that unlike any other state, the central coordination, management, and administration of the Wisconsin EES was assigned to University of Wisconsin-Extension. The Wisconsin Office of State Planning and Energy submitted the application and continues to be the link between the governor's office and the EES.

The Wisconsin Energy Extension Service has two ultimate objectives: (1) conserving energy and (2) shifting to wider use of renewable fuels in the state.<sup>6</sup> These are two key pillars of Wisconsin's long-range energy policy, and are especially

important goals for a state that must import 98% of its energy.

The Wisconsin EES contains six programs:

1. Energy conservation for low- and moderate-income households.
2. Statewide coordination of energy audits and energy conservation training.
3. Energy conservation in local government operations.
4. Energy conservation in the hospitality industry (a major Wisconsin economic sector).
5. Energy conservation in the agricultural transportation industry.
6. Use of wood fuel in heating residences and small businesses.

In the aggregate, the six programs address two of the most energy consumptive end-uses in Wisconsin: transportation and the operation of small businesses and residences. These target sectors are among the most promising areas for conservation and shifts to renewable fuels.

Importantly, the EES was designed to support, supplement or extend existing and planned conservation programs in Wisconsin, including those under the State Energy Conservation Plan. The program also dovetails with activities of the state Public Service Commission, which has gone farther than any other state in ordering the state's gas utilities to submit comprehensive energy conservation plans. The entire EES effort relies on existing information networks, including those of Extension, the state Vocational, Technical, and Adult Education system, and the state's several departments with significant energy consumer contacts.

## Conclusion

Education is one of several approaches that will be employed in addressing the energy issue. It's not, however, the singular vehicle for influencing change, and it will have to be linked in a complementary fashion to technological, economic, and regulatory approaches.

Successful programming will require not only a positive and reinforcing interaction with the many other sectors in the energy arena, but also an active posture of program development. We need to take notice of social science research on cognitive educational approaches. Our programs need to be examined for *impact*, not for number of contact hours, brochures mailed, etc. Perhaps our basic strategy should be to seek out conflict situations. Perhaps our programs should focus on "decision makers." Extension educators who hope

to have an impact on the energy situation can't be fans . . . they must be players in the fullest sense of the word.

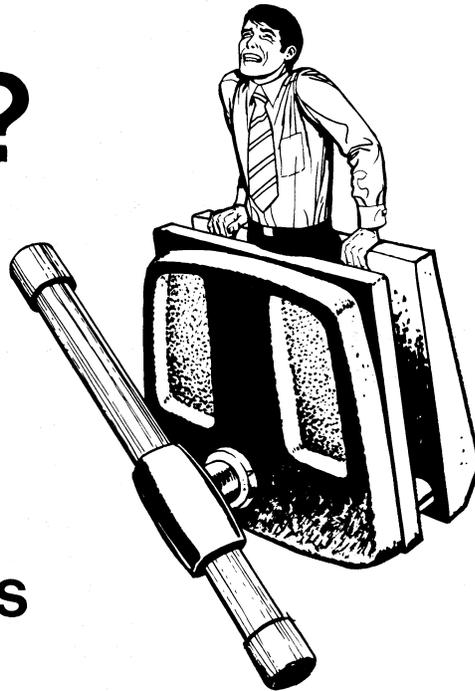
### Footnotes

1. W. T. McGuire, "The Nature of Attitudes and Attitude Change," in *The Handbook of Social Psychology*, Vol. III, Gardner Lindzey and Elliot Aronson, eds. (Reading, Massachusetts: Addison-Wesley, 1968).
2. Thomas A. Heberlein, "The Three Fixes: Technological, Cognitive, and Structural," in *Water and Community Development: Social and Economic Perspectives*, Donald Field, James Barron, and Burl Long, eds. (Ann Arbor, Michigan: Science Publishers, Inc., 1974), p. 282.
3. Heberlein, *The Three Fixes*, pp. 279-96.
4. Joseph Cannon Bailey, *Seaman A. Knapp: Schoolmaster of American Agriculture* (New York: Columbia University Press, 1945).
5. Department of Energy (EES), October 28, 1977, memo from Mary Fowler, "Summaries of Pilot State Energy Extension Services."
6. Proposal to U.S. Energy Research and Development Administration for a Wisconsin Energy Extension Service, June 27, 1977.

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# Pressure?

May/June  
1980 Special  
theme issue



## Managing Stress

A concentrated look at an increasingly important subject for Extension professionals. Dr. Ron Daly, SEA-Extension specialist in Family Relationships and Child Development will be the guest editor.