Challenges for Public Utility Regulation in the 1980s

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Complications in the Regulatory Treatment of Conservation Costs

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No one loves a nay-sayer, but that is something of the role my remarks may have under the general panel topic, "Conservation, Efficiency, and Public Policy." I say this because there is a very human tendency to race ahead with what seems to be intuitively a good idea (who can speak ill of conservation?), especially if the occasion for doing so is highly visible and widely thought to be necessary, such as lessening dependence on foreign energy sources. I do not mention reducing capital (plant) investment in this context because I do not believe that is central to the new forces of conservation; rather, it is a secondary argument that helps rally support for the first proposition.

Without being too defensive about the cautionary stance that is the tone of my paper, let me note that in the past year I have participated in a number of energy conferences sponsored by various public agencies.

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The themes and content were largely a celebration of this or that conservation idea of either the hardware or program variety — an uncritical promotion. I have in mind, for example, meetings on small-scale hydro, fuel cells, cogeneration, and residential conservation measures. After a few such experiences, one gets the feeling that saving another barrel of Persian Gulf crude oil is inherently a good thing, even if the cost of doing so exceeds $36.00. This may even be true, but surely it is more so for the National Security Council than for a state public utility commission.

Finally, my paper is neither heavy on accounting nor terribly original in discussing some of the complications arising from conservation programs. I hope it will have served a useful purpose if it recalls and restates a series of considerations on which regulators might pause before embracing one or another cost treatment of utility activity in conservation.

What Is Happening?

Quite a bit is going on in residential conservation, but probably not as much as the Department of Energy would like. Oregon, Rhode Island, Connecticut, Nebraska, New Jersey, New York, and California (to name several) are among the states in which utility conservation activities of various sorts have reached the state commission level. Oregon's conservation efforts predated the national legislation on the subject; Rhode Island, Connecticut, and Nebraska are initiating the Residential Conservation Service (RCS) plans called for in the National Energy Conservation Policy Act; New Jersey is considering a major plan proposed by the utilities; and New York and California (with some important distinctions between them on this subject) have perhaps provided the most analytical work on the matter.

We are told that as of early November 1980, 46 states had submitted RCS plans; that 21 have been approved by DOE (one has been disapproved); and that 8 more were expected to be approved by December 1980.

Since the passage of NECPA in 1978, governors' offices have been busy designating (usually) either the state public utility commission or the state energy office as the lead state agency for its implementation, and DOE has been busy promulgating rules and guidelines in the Federal Register. There are five main features of the RCS program with respect to costs of residential energy conservation measures.

First, separate accounting is required. Amounts spent or received by a utility attributable to its RCS program must be accounted for
What Does It All Mean?

In thinking about the implications for regulation, I have organized my comments around three general issues: (1) the appropriateness of the institutions (public utility commissions) in terms of what is being asked of them; (2) the effectiveness of doing it at all, that is, making conservation investments a co-equal strategy to central station power supply; and (3) the costliness (in the broadest, nonmonetary sense) of the kinds and amounts of conservation activities to state commission regulation.

Appropriateness

Economists and operations researchers often refer to the problem of suboptimization, and I think it is relevant here. Not surprisingly, Congress and the executive branch see less dependence on foreign energy as in the national interest, and public officials and policy makers seek to discover ways to achieve that goal. Existing institutions are harnessed to advance the goal, and new programs are grafted onto old ones whenever possible. Targets of opportunity are located, and forward motion is the key. The fit becomes of lesser importance, and the side effects (especially negative ones) often are overlooked.

At least some of this describes the current case in which not only states are expected to carry out the national goal of conservation, but also private companies, the utilities. More specifically, whatever merit conservation may have from a national vantage point, it is not clear that public utility commissions, particularly state regulators, are the appropriate agents for the singleminded pursuit of this one objective. Only when the interests of their responsibilities to rate payers are coincident with the national goal would this be so. Much the same is true for power companies, which face shareholders, on the one hand, and customers, on the other. It is not enough to assert that at some lofty level and at some point the interests of all these constituencies are the same on this matter.

In short, in our zealous quest for energy conservation, we may be looking for too much help from institutions not designed to give it and then unfairly decrying their poor performance.

Effectiveness

At the heart of the effectiveness issue is the need for thorough analysis and hard evidence that large-scale conservation efforts can reduce demand significantly and at some fraction of the cost, when all costs are considered. Loose comparisons of $1,000 per installed kilowatt of new plant compared to conservation investments of $200–$500 per kilowatt saved need to be fully supported and presumably generalized from more than the odd case. Perhaps this has been done, but I suspect not.

If we are serious about utility companies and regulators following a least-cost investment strategy that encompasses conservation, cogeneration, renewables, and additional interties, as against traditional central station power plant expansion, we are asking that the net be cast broadly. We need to know all the costs of a conservation investment program, including the overhead costs. A comparison would have to be made with the marginal cost of new plant; the revenue requirement for conservation financing would have to be determined; cost-effectiveness calculations would have to be done for each potential conservation measure; and a fair pricing system would have to be arrived at for both participants and nonparticipants in the conservation investments. In sum, the examination should be similar to a systems analysis for capacity expansion, with special recognition that phantom kilowatt capacity forgone is a fairly elusive (although not illusory) notion.

There are exceptions, but it is widely felt that elevating the conservation investment and focusing thereon goes against the grain of most power company executives. After decades of growth and promoting consumption, they are understandably ambivalent about changing marketing departments to conservation departments.

Several inducements often are mentioned: Conservation investments can be made in smaller increments than generating plant investments; risks are a good deal lower; cost and revenues of a struggling utility can be more easily gotten back into line; and diversification may be helpful to company strength. Of course, the strongest inducement is to allow conservation investment expenditures. It was this that prompted Congress to change the 1978 law, and not any newly developed persuasive rationale for rate base treatment as against cost recovery only. Public policy may well have brought its way into the attention of the electric and gas utilities if to this favorable change are added the old encouragements of rapid depreciation, construction work in progress, and tax preferences, as well as such new practices as differential rates of return and commission preapproval of conservation investment decisions.

In terms of consumer behavior, there is a danger of overstating the likely gains from conservation investment. Most current studies on
services rendered. An individual choosing not to participate receives no services and therefore pays nothing; and (2) benefits received, or charge the costs incurred to the beneficiaries of the services rendered. With RCS this means that some costs are borne by all rate payers (in proportion to consumption), on the argument that utility rates for everyone are likely to be lower than they would have been without the increased conservation efforts.

Although many key decisions (for example, who pays for an energy audit) are left to state regulatory authorities, the accounting provisions of NECPA and the Final Rules are formulated on the premise that employing a strict causer-of-cost system will result in an inadequate amount of energy conservation. DOE's urging that audits be provided without direct charge to the customer is further evidence of this attitude. Like education, weatherization and other measures confer benefits on more people than those who purchase them individually. If forced to pay full cost, too many consumers would reject conservation measures as bad investments, especially if the front-end costs are substantial and the payback uncertain or delayed. Accordingly, a cost recovery technique is preferred by the national policy maker whereby a customer is subsidized (or at least believes that subsidization occurs) by all other rate payers in the utility system. With such an incentive scheme, the national effort for energy conservation is supposedly enhanced.

Even though the benefits received spirit is clearly present, the federal government (as mentioned) mandated this method of cost recovery only in the case of costs associated with the provision of RCS program information. Even here it is arguable whether spreading the costs over the system is fairer than a causer-of-cost approach. The customer has no choice about whether or not he wants to receive the information. Expensing the information costs makes it appear (falsely) that the utility is disseminating the data free, when in fact rate payers are paying in proportion to their consumption (as a cost-of-service item). Furthermore, it is likely that the cost of providing the information to each customer is about the same regardless of consumption. Also, all customer classes may be charged even though the targeted group is the residential customer — this on the theory that capacity will be forgone, rates will be kept lower, and benefits will flow to all. Much of the same reasoning, and counter-reasoning, applies to the question of who should pay for residential energy audits.

As for the participants/nonparticipants problem, those who install energy conservation measures presumably receive the benefits of both lower energy use and avoided cost to the system; nonparticipants benefit only by the latter. Accordingly, a different charge should be determined for each category. It is still difficult to answer the question of just why a user who has already weatherized his all-electric house should subsidize the belated conservation costs of a customer who heats with oil.

For symmetry, and perhaps for argument's sake, there is still another party that might be thought of as a candidate for recovery of RCS costs. This is the utility shareholder. For this to make any sense, the benefits received principle would have to be invoked. If it should turn out that, as conservation efforts increase, utilities operate with lower levels of risk and uncertainty, new construction is postponed, the need to raise costly new finance capital is lessened, and revenues are stabilized, then regulators might want to treat a portion of RCS costs as below-the-line expenses, not allowing all of them in cost-of-service or rate base. To the extent this were done, customer participation in energy conservation would truly be free of charge, and the economic incentive to participate would be at its most powerful.

While perhaps somewhat punitive, there might be an additional rationale for allocating to the utility group some burden of conservation costs. Using the concept of least-cost alternatives, conservation investments by a utility presumably will only be made if they are more efficient and cost effective than its next alternative generating source. The proposition raises the question of whether there are any current generating sources of the utility company that are less efficient than energy conservation investment now or at the time they were chosen.

Finally, and it is very difficult even to mention this without being charged an ideologue of reactionary stripe, the energy conservation movement runs the danger of being characterized by the "hassle factor" and seen as a "mother hen." Not exactly terms of art, but the point is still clear: Customiers will put up with only so much bother and intrusion. Acknowledged or not, they would rather shape their behavior in the marketplace.