

**Incentives vs. Regulation:
How to Best Make our Energy Green**

The process of finding new resources and developing better technology is an unending one when it comes to the creation of a sustainable energy policy. Perhaps a more immediate concern of many policy makers is how to promote and foster the forms of “green” (i.e., environmentally friendly and usually renewable) energy that exists today. Traditionally, governments have been presented two options as to how they might help green power succeed. The more common of these two has by and large been “command and control” regulation, but as the electric industry has undergone a process of restructuring and deregulation, the invisible hand of the marketplace has had more and more of a say in not only the price of energy, but also how much of it is green. Since green power is not yet inexpensive enough to compete with traditional, nonrenewable energy sources on the open markets, governments have tried a second method; providing incentives. Incentives offer a potential for great success in fostering green power, and in fact are more similar to traditional regulation than their moniker may suggest.

Understanding the debate over incentives versus regulation requires an understanding of the traditional setup of the electricity industry. Because of the large amount of infrastructure involved in getting electricity from power plants to consumers, electricity was for most of its existence regarded as a natural monopoly. This means that the same companies owned the generation, distribution, and transmission of electricity,

and consumers had no choice as to who they bought electricity from. Governments regulated the monopolies to ensure that they charged fair prices and met environmental standards.

During the Reagan administration, however, there began in utilities industries a trend of deregulation, beginning with the judicial breakup of the telecommunication industry. In the 1980's, however, this new trend did not immediately present itself as positive from an environmental perspective. As Randall Baker points out, "the Reagan era of deregulation and market economics, put the most of the programs to foster alternative energy on the back burner" (Baker 143). Wholesale electricity, which comes under the jurisdiction of the Federal Energy Regulatory Commission (FERC), was deregulated in 1992 by the Energy Policy Act (Ferrier 11-12). Retail electricity, however, comes under the jurisdiction of the states, and some states have restructured their electricity markets, while others have not (Regulatory Assistance Project 1).

Restructuring/deregulating electricity involves separating electricity generation from transmission and distribution. A consumer in a deregulated electricity market can buy power from whatever company he or she likes, though that does not mean that just power produced by that company's plant is coming into that individual consumer's home. What it means is that that company will put that much more power into the nation's energy grid, so if a person chooses to buy from a green power company, a portion of energy from environmentally friendly sources equal to the quantity consumed by that person will go into the grid.

In the traditional, monopolistic model of the electric industry, the justification for regulation was the existence of *market failures*. As Lloyd Orr states,

Markets, like all other social institutions, are imperfect in many dimensions. When departures from the standard are substantial, there can be serious social and economic consequences, which are a form of market failure. Environmental degradation—a *negative externality*—is one of the prime examples of this market failure. (Orr 163)

In a monopoly, these externalities are particularly concerning because consumers, lacking options as to their electricity providers, are effectively trapped. They may wish to switch to a more environmentally conscientious provider, but are unable to do so. Thus, in markets that have not been restructured, it is the job of the regulators rather than of the invisible hand of the market to keep companies green. Many, however, feel that that invisible hand could do the job better: “the official perception was that most energy problems are related to ‘market imperfections,’ and that perception was best dealt with not by more policy but by deregulation” (Baker 144).

There are still those who prefer regulation, and they make the argument for it on several grounds. Their first argument is an ideological one; regulations “set the standards and establish the sanctions for those who would willfully disregard ‘the will of the people’” (Baker 132). Regulations, therefore, have an egalitarian quality that a market-based approach to environmentalism lacks (or at least ideally they do—whether regulatory commissioners in the real world could be described as egalitarian is another debate). Conversely, many environmentalists see incentives as “selling our priceless heritage like an ordinary commodity” (Orr 182).

Secondly, those favoring regulations say that consumer ignorance will provide an insurmountable obstacle in switching to an open energy market. People won’t be used to having choices, often won’t be aware of the choices available to them or how to switch from one provider to another, and thus will often stick with their default supplier. States

that have restructured have tried to combat consumer ignorance by advertising the fact that they have restructured and making citizens aware of their choices, but this has not yet had the sorts of results many had been hoping for. In Connecticut, for example, fewer than two percent of consumers have switched suppliers since the state restructured several years ago, and only a small percentage of those chose a green power option (McCarthy).

The most compelling argument made by regulation advocates, however, is that restructuring and opening up markets simply will not do anything to protect the environment, and in fact, quite the opposite will occur. Cleaner power could very easily lose out in a competition with cheaper power (Beecher). “The energy industry faces a major difficulty in moving to ‘alternatives’ because renewable energy sources would have to compete with the extremely low base price of oil to recover their costs and turn any sort of profit” (Baker 145). This is where government incentives enter the picture, taking the place of traditional regulation.

Randall Baker notes that “environmentalists encourage us to look at the ‘real’ costs of fossil fuels (incorporating environmental externalities); this, too, might encourage new pricing policies” (Baker 153). These new pricing policies, what Lloyd Orr refers to as *full social cost pricing*, involve placing supplementary charges such as taxes on polluting means of electricity production so as to make the cost of production reflect the aforementioned negative externalities and make the cost to consumers comparable to that of renewable energy sources. “The power of supplementary charges lies in their mimicking the market in the sense of creating incentives for decentralized, productive decision making that conserves social resources in a complex, interdependent

economic system” (Orr 181). This approach is less costly to governments and more effective than the traditional “command-and-control” method of regulation, which is based on imposing very specific environmental regulations on electricity producers (Orr 184). It also promotes more innovation on the part of companies that seek to avoid charges by developing better technologies.

While some incentives advocates focus on charging polluters, others focus on promoting nonpolluting producers. “What policy tools to states have to encourage the use of green power by customers? They can make it cheaper, easier, they can promote it, and they can buy it themselves” (Beecher). This is really the flip side of the same coin, however, as these positive incentives will likely be paid for by taxes on fossil fuels. States have actively promote green power through three types of incentive-oriented policies: (1) financial incentives for producers, such as tax incentives, grants, loans, rebates, industrial recruitment, and solar energy equipment sale and leasing arrangements; (2) awareness programs for consumers, such as requirements or support for utility green pricing programs, green power purchasers/aggregators, education and assistance programs, demonstration projects, and research and outreach centers; and (3) market rules, regulations, and policies, such as the establishment of public-benefits funds, renewable-portfolio standards, net-metering extension analysis, generation disclosure, contractor licensing, equipment certification, solar/wind access laws, and construction and design standards ([Database of State Incentives for Renewable Energy](#)).

This switch to an incentives-based policy is also not quite as significant a shift as it may appear to be. Regulators have always had providing incentives as one option available to them, and command-and-control regulators use incentives frequently

(Beecher). The ultimate benefit of incentives is in the fact that they “put more emphasis on the carrot than on the stick” (Beecher). This means that incentives foster innovation by making companies still desire to change in order to save money, and they do not stifle regulation by laying down the very prescriptive regulations that traditional regulators are frequently guilty of writing.

In the end, however, both incentives and regulation can only take us so far, due primarily to ignorance, public inertia and people’s reluctance to modify their lifestyles. “In the absence of a groundswell of deep public concern, we would normally not expect to see too much pressure for change” (Baker 140). It may take either a real crisis or an artificial one, a “strategic energy stranglehold,” to lead to the development of an energy policy based primarily on renewable sources (Baker 143). If the best efforts of government will in the short term make a dent in the problem at best and will in the long term be predicated on a crisis, then the environment’s only hope will rest on the adjustments of individual consumers. “A serious energy policy requires an equally serious recognition of personal responsibility and a willingness for everyone to, as it were, ‘reform themselves’” (Baker 141). This means that until technology is developed to make renewable energy cheaper consumers will have to accept the limitations of incentives and pay more for Green Power.

This, I think, is the nub of the matter: will people voluntarily pay more for Green Energy? Given the howling that results from small increases in the price of gasoline, this seems unlikely – for now, at least. Which connects to Norman Care's chapter on "Protecting Future People: the Motivation Problem."

Governments and regulators realize that it will be an ongoing process finding a way to simultaneously maintain economic growth and transition to a more sustainable

energy policy. As Doctor Janice Beecher, director of the Institute of Public Utilities at Michigan State University, says,

Regulation...has always been about...standards (what is minimally or socially acceptable practice – such as reliability or service standards, or even value-based or socially driven rules like not shutting off heating customers in the middle of the winter), incentives (positive and negative), and accountability (transparency and reporting requirements, the ability to audit). Over the years, we fine tune how we accomplish these three things.

This process of fine tuning will likely result in a system where both traditional regulation and market-based incentives have a place. “Supplementary charges are not a solution to be mechanically applied to all resource and environmental problems. Conservation inevitably will require other forms of regulation and social change in a complex policy milieu” (Orr 181). Environmentalists must have patience with this system as well as with the society on which it is acting; “having built a society and economy on cheap energy and a high order of personal mobility, it is difficult to alter the infrastructure that such phenomena engender to suit another system” (Baker 142).

The ideal regulatory framework has yet to be discovered, and discovering it will require a full appreciation for the complexity of the economic and policy making institutions involved. That is a daunting task, but gains are being made. In restructured electricity markets across the country there are legislators and environmental lobbyists working to see that people pay the full social cost of their fossil fuel electricity. Others are at the same time working to promote and provide incentives for green power alternatives. Through their efforts, achieving a sustainable domestic energy policy is a real possibility.

This is a well written, balanced, analysis of the issues. I wish I could have been present to hear Prof. Orr's comments.

Works Cited

Baker, Randall. "Energy Policy: The Problem of Public Perception." Energy: Science, Policy, and the Pursuit of Sustainability. Ed. Robert Bent, Lloyd Orr and Randall Baker. Washington: Island Press, 2002. 131-156.

Beecher, Janice. Email interview. 28 Feb. 2004.

Database of State Incentives for Renewable Energy. 26 Feb. 2004. Database of State Incentives for Renewable Energy. 28 Feb. 2004. <http://www.dsireusa.org/>.

Ferrier, James A., ed. International Electric Power Encyclopedia. Tulsa: PennWell Publishing Company, 1998.

McCarthy, Kevin E. "Environmental Provision Of Electric Restructuring Bill." OLR Research Report. 31 March 2003. Report Number 2003-R-0316. Connecticut General Assembly. 28 Feb. 2004.
<http://www.cga.state.ct.us/2003/olrdata/env/rpt/2003-R-0316.htm>

Orr, Lloyd. "Energy and Sustainable Economic Growth." Energy: Science, Policy, and the Pursuit of Sustainability. Ed. Robert Bent, Lloyd Orr and Randall Baker. Washington: Island Press, 2002. 131-156.

Regulatory Assistance Project, The. Performance-Based Regulation for Distribution Utilities. Dec. 2000.