Currents

Straws in the Wind

Ah, spring is lovely, even in Washington. Those of us who are concerned about the increasing regulation of the U.S. economy, however, appear to be headed into a gale. There are a few contrary breezes, but they seem likely to be overwhelmed by the number and magnitude of pending regulatory measures.

Insurance

In April Rep. John Dingell, the powerful chairman of the House Energy and Commerce Committee, introduced a major bill that would impose federal regulations on the insurance industry. That bill would also establish a national reinsurance fund through which solvent insurers would cover the policy claims on failed insurers but without a federal guarantee. Insurers that do not elect to participate in the federal system or do not meet the federal solvency standards would continue to be regulated by the state insurance commissions. All insurers would continue to be subject to continued state regulations of insurance rates.

The primary problem of the Dingell bill is the separation of solvency and rate regulation (see the later article by Scott Harrington); state insurance commissions would have even less incentive to be concerned with insurer solvency in setting insurance rates. The other problem of that proposed bill is that there is probably no way to avoid an implicit federal guarantee of a national reinsurance fund, with all of the consequent problems of the deposit insurance funds and the several federal credit programs.

The Dingell bill is seriously flawed but could provide the basis for useful legislation. The most productive outcome would allow national insurers to elect federal solvency regulation in exchange for full immunity from federal or state rate regulation. In the absence of such a provision, the seriously flawed system of state insurance regulation is probably better than any federal regulation.

Medical Care

Congress is also considering a major bill that would extend the Medicare payment rates for physicians and hospitals to all private payers. That bill was introduced by another baron of the House, Rep. Dan Rostenkowski, chairman of the Ways and Means Committee. The bill, in effect, would establish a system of "optional" price controls. That system, however, would be optional only to the payers, not to the providers. Physicians and hospitals would be required to provide medical care to all patients and, at the option of the patient or private insurer, accept the government-determined rates as full compensation. Congress should be reminded that, in the relation between men and women, such one-sided consent is properly described as rape.

The primary effect of the Rostenkowski bill would be to establish a two-class system of medical care. Patients insured by payers that do not participate in that system would continue to receive high-quality medical care. Patients in plans that elect to participate in that system would have lower insurance rates but would also experience all of the qualitative effects of medical care price controls in other countries:

- less convenient appointment hours
- shorter physician's time per visit
- longer waiting times for nonemergency care
- the denial of some services and test procedures
- a reduction in the number of physicians and hospitals in rural areas and the inner cities
- a lower level of amenities in hospitals
- in general, a lower standard of medical care.

The magnitude of those effects would depend on the difference between the payment rates that would otherwise prevail and those rates set by the government for each category of physician and hospital services. Small price savings would lead to small reductions in quality; large price savings would lead to larger reductions in quality.

"Well Mr. Thoreau, we're interested in publishing your views on government authority and personal freedom, but perhaps you could leave out some of the references to lima beans and turnips."

Medical care providers, in turn, would be subject to increased regulation to enforce the payment rates and limits on balance billing and in an attempt, probably futile, to prevent the discrimination in services between the two classes of payers. Over time, in addition, the increased regulation and lower income would reduce the number of medical professionals and the quantity of medical care.

Congress should not deceive itself or the American people that such a system would restrain the inflation in medical prices without causing those other effects. Price controls are the political equivalent of trying to make water run uphill. One might hope that the collapse of communism had destroyed the illusion of scientific socialism, but the recurrent proposals to control the prices of medical care suggest that Congress has not yet learned that lesson.

Energy

April was a busy month. The House Interior Committee approved legislation that would tighten nuclear licensing procedures and would extend and broaden the moratorium on offshore oil development. The Senate had previously deleted the proposal to open the Alaskan Natural Wildlife Refuge to oil development. In the following month, Congress probably expressed concern about our increased dependence on coal and imported oil.

Antitrust and Trade

The administration was not immune to incoherent policies. The Justice Department announced that it is considering antitrust actions against domestic subsidiaries of foreign firms if the behavior of the parent firms would be actionable under U.S. law and have the effect of restricting U.S. exports. The domestic subsidiaries, in effect, would be hostages, even if their behavior is wholly consistent with U.S. law and the behavior of their parent firm is wholly consistent with foreign law. The extraterritorial application of the laws of any nation should be regarded as an offense but is especially short-sighted on the part of our government. As a consequence of our low saving rate and unusually large federal deficit, the United States is especially dependent on foreign investment. Such an action by the Justice Department, of course, is likely to reduce foreign investment and the level of total investment in the United States.

Creative accountants at Customs, moreover, have determined that Hondas assembled in Canada with an engine produced in Ohio do have sufficient local content to qualify for tariff-free treatment under the U.S.-Canada Free Trade Agreement. The Canadians have correctly interpreted that action as an attempt to shift foreign investment from Canada to the United States (maybe to create more hostages to our antitrust laws). At roughly the same time, creative accountants at the Commerce Department have again determined that the Canadians are subsidizing their soft wood lumber exports, in this case by a measure (the prohibition on the export of logs from public forests) that is similar to a U.S. measure. In the meantime, our trade officials have reported that negotiations on the North American Free Trade Agreement have proved to be more complex than expected. Big surprise?

The Global Environment

In June representatives of most nations met at the Earth Summit in Rio de Janeiro. The objective of that conference was to elicit commitments to address the perceived "crises" of the global environment. The primary problem of the conference

was that there is almost no solid scientific evidence of those perceived crises (see the later article by Richard Lindzen on global warming). The primary threat from the conference was that our government might make a premature commitment to taxes or controls on the use of carbon fuels that would further reduce our very low rate of economic growth. The mindset that led to the Earth Summit is probably the major regulatory threat of our lifetime. May I wish that all participants suffered a mild bout of dysentery.

Some Contrary Breezes

Life is not without hope. There were a few warm breezes to sustain the optimists that science, economics, and the rule of law might constrain the regulatory behemoth.

James MacRae, the acting administrator of the OMB Office of Information and Regulatory Affairs, recently induced a paroxysm among the regulators by observing, correctly, that the reduction of income resulting from some health and safety regulations might increase risks by more than those the regulations would reduce. MacRae was forced to back down on the specific OSHA ruling to which he applied the perspective. The potential for a more general application of his perspective, however, is substantial. That perspective shifts the criterion from a comparison of estimated benefits and costs to a risk-risk or a life-life comparison. That avoids both the selective statutory and court rulings that prohibit the application of benefit-cost analysis to safety issues and the awkward problems of estimating and defending the value of a statistical life. Moreover, the available estimates of the incremental income that would save one expected life are in the same range as the estimates, based on revealed behavior, of the value of a statistical life, so the two types of analyses lead to roughly the same conclusions. This story is not over. We need better estimates of the effects of increased income on the reduction of illness, injury, and death. And, after their paroxysm has subsided, we need to explain to the regulators why "wealthier is healthier" and why some health and safety regulations reduce both wealth and health.

Sam Kazman, the counsel for our adventurous friendly competitor, the Competitive Enterprise Institute, recently took the Justice Department, the National Highway Traffic Safety Administration (NHTSA), and (as an intervenor for the defense) General Motors to court and won! The case involved the automotive fuel economy standards, and the charge was that NHTSA had not considered the effects on automotive safety (its primary mission) in setting the fuel economy standards. The scientific evidence is clear and was conceded by NHTSA: large cars are less fuel efficient but are safer than small cars. The issue was whether NHTSA could set the fuel economy standards without considering the effects on safety. In this case, Judge Steve Williams of the federal Court of Appeals for the District of Columbia wrote a strongly worded decision, and a divided panel of that court (including Justice Clarence Thomas) ruled against NHTSA. That decision has two important general legal implications: a public interest group was granted standing to challenge a regulation without representing a specific individual that was harmed. And a regulatory agency must consider side-effects of regulations within the scope of their statutory authority.

Finally, we are awaiting a Supreme Court ruling in the *Lucas* case that would restore some constitutional protection to regulatory takings of property.

Hope springs eternal!

W.N.

Reviving Life Insurance Sales Policy

Peter Katt is a life insurance agent who thinks he has invented the better mousetrap. The West Bloomfield, Michigan, resident wants to sell life insurance in a radical way: charge his customers an hourly rate for his services and then rebate to them 100 percent of any commission he receives from the insurance company. "Why not?" Katt asks. Doctors, lawyers, accountants, and other professionals charge by the hour. Why not insurance agents?

There is only one problem with his idea: it is illegal in Michigan. In fact, Katt could lose his license, pay a $25,000 fine, and spend three months behind bars if he engaged in the heinous crime of "rebating" his commission to his customers.

That is odd, particularly when one considers that Michigan's largest employers are automakers, who use rebates as a normal, competitive business practice. Unfortunately, rebating is a dirty word in the insurance business, and Michigan is not unique. Antirebate laws are on the books in every state except California and Florida. And if you are wondering why life insurance is such a confusing subject and why it is so difficult to compare competing policies, those antirebate laws play a major role.

To understand why that is so, it is important to understand that life insurance companies compete for business by trying to offer agents higher commissions than their competitors. Thus, it is not surprising to see insurance companies pay agents 90 percent (or even 105 percent) of the first year's premium as compensation, with only piddling sums paid out in subsequent years.

Up to a point that makes sense. Insurers realize that life insurance is a topic that most consumers prefer to avoid. It reminds them of their own mortality. Thus, the most successful agents tend to be the ones who manage to break down the customer's natural desire to avoid the subject, and a generous, up-front compensation scheme rewards that skill.

But the imposition of antirebate laws on that system makes no economic sense and can create some serious problems. First, and most obviously, some agents may prefer not to keep the full commission. They would rather compete for a customer's business by offering a lower price or, as Katt proposes, a different type of service. Antirebate laws quite deliberately forbid that type of competition, in much the same way as it used to be illegal for stockbrokers to discount their commissions.

Second, antirebate laws strengthen the anticompetitive aspects of the commission system and thus create an inherent conflict of interest between the agent's desire to maximize income and his obligations to the client. And that can cost consumers, even supposedly sophisticated consumers, plenty.

Katt tells with relish the story of the lawyer who bought a $500,000 policy with a first-year premium of $6,830, which would have a cash value after twenty years of $167,145. When Katt reviewed his client's insurance coverage, he wanted to know whether the agent ever mentioned that the insurer sold a virtually identical policy that had a cash value of $257,790 after twenty years and that required the customer to pay a first-year premium of only $6,400. The answer was no.

What explains the difference between those two policies, one of which is obviously a better deal for the consumer? The answer is the commission structure. The former policy pays agents a 90 percent commission, or $6,147, whereas the latter policy pays only a 45 percent commission, or $2,880. By not telling potential customers about the latter policy, the agent is able to pocket an additional $3,267.

As this anecdote makes clear, the consumer does not always come out ahead under the commission system, and the problem is compounded by the fact that consumers have difficulty comparing policies on their own. There is no consumer guide to insurance policies in the same way that there are consumer guides for new-car buyers. And most consumers do not realize how central the commission system is to how much they pay and what they receive, which is why you probably never asked your agent such questions as "How much will you earn if you sell me this policy?" or "Do you have anything that pays you only a 50 percent commission?"

Small wonder that life insurance is perceived as confusing and complicated. It is, and the antirebate laws help insurers and agents keep it that way.

What is missing from this picture seems obvious: an information broker who is not swayed by the commission figures dangled in front of his eyes by the insurance companies and who can afford to be objective because he will be paid the same amount of money whether he recommends policy A or policy B. And that is the niche that Peter Katt would like to fill if it were not illegal for him to rebate.

Katt figures that if he charges a client a flat hourly rate for his time (say, $110 an hour), he can provide objective advice about the merits and demerits of particular policies without regard to who the insurer is or how much he will get paid. From the client's standpoint, that is also a winning combination. The client can be comfortable that the agent has no hidden agenda and is recommending policies that meet his specific needs. Also, Katt's proposal can produce considerable savings, as first-year premiums can easily cost several thousand dollars.

The case for abolishing antirebate laws would seem to be clear-cut. After all, minimum fee schedules for lawyers and fixed commissions for stockbrokers both ended in 1975 and thus paved the way for more price and service competition, most

clearly seen in the form of legal clinics and discount brokerages. So, too, in the insurance field, one could expect to see the emergence of discount agents who compete by offering rebates to consumers, while others, such as Mr. Katt, would offer a system that emphasizes personalized service and advice.

But if rebating and competition are such good ideas, what is stopping them? To understand the answer, a small bit of history may be useful.

Antirebate laws arose during the zeal of the Progressive Era. In the early 1900s the New York legislature created the Armstrong Committee, which recommended a comprehensive set of proposals that resulted in the modern framework of insurance regulation. Public concern focused on the fact that many thinly capitalized insurance companies emerged on the scene in the last third of the nineteenth century, and many of them went bust or otherwise failed to have enough money on hand to pay claims.

To remedy those problems the Armstrong Committee recommended a series of proposals designed to assure that adequate reserves were maintained, speculative investments were discouraged, and other steps were taken to assure the financial soundness of insurance companies. State legislatures, led by the National Association of Insurance Commissioners, quickly fell into line.

The Armstrong Committee, and state insurance regulators generally, viewed rebating as an evil to be stamped out, though for reasons having little to do with protecting the public. For a flavor of the regulatory thinking at the time, consider the remarks by a speaker at the 1904 national convention of insurance commissioners who fulminated angrily about how rebating was "moral turpitude" and "professional suicide," comparable to "race suicide," although fortunately (in his view) the "higher class" of agents were "doing all in their power to eradicate it." He also complained that criminal laws against rebating were simply not working because juries would not convict, and he recommended that enforcement be transferred to insurance commissioners, who presumably knew moral turpitude when they saw it.

The economics of antirebate laws were defended on grounds that are shaky at best, namely, that insurance companies would stop paying high commissions if agents were forced to keep the money. But the proponents never spelled out what marketing technique insurers would use in place of high commissions to encourage the sale of particular policies. Insurers were paying some commissions exceeding 100 percent of the first year's premium in 1900, and they are still doing so today.

Antirebate laws were sold to the public as a means of preventing discrimination between two identically situated policyholders in terms of the amount of money they spent on insurance. That argument simply makes no sense. An insurance premium consists of two parts: the part retained by the insurer to pay claims, overhead, and other expenses (the "net premium") and the part returned to the agent in the form of a commission. The two figures are unrelated to each other, and giving one consumer a break on the commission does not affect the amount of insurance coverage each person is buying and will receive.

Suppose, for example, that two thirty-year-olds buy the same $100,000 policy, and one receives a rebate, but the other does not. The insurer holds on to the same net premium from both payments and will pay out $100,000 to the estates of both people when the time arises. The only difference will be that one customer bought a policy at a discount outlet and the other did not, which is usually not a cause for regulatory heartburn.

The discrimination rationale is odd since insurers routinely draw distinctions that nobody seems to mind—lower rates for nonsmokers being the most obvious—along with the less well-known practice of charging someone who buys a $500,000 policy a lower unit cost of insurance than someone who buys only a $50,000 policy although both people pose the same actuarial risk. The number of agents who shed a tear over the fact that affluent consumers get such a break probably equals the number who would denounce the practice of selling a policy with a 90 percent commission and not mentioning a virtually identical policy that pays only a 45 percent commission.

That is not the only defense of antirebate laws being offered today. Agents will tell you that insurance companies cannot survive if they have to pay out 105 percent of the first year's commission and the policyholder then cancels the policy after one year to buy a new policy and get a new rebate. Therefore, they claim, we need antirebate laws to maintain the financial solvency of the industry.

Let us consider that defense closely because it makes some assumptions about the behavior of consumers and insurance companies that are dubious at best. First, it is highly doubtful that consumers will stampede their life insurance

agents' offices each year to buy a new policy from an agent offering them a rebate of, say, 5 or 10 percent. Consumers would not be getting something for nothing, even under Mr. Katt's proposal to rebate 100 percent of his commission, since they would still pay a flat rate for his time. Moreover, a new life insurance policy is a commodity that becomes more expensive with each passing year—a fact that discourages replacing one's policy now—and that would continue to be the case, even if rebating were legalized. Finally, the key premise of the insolvency argument is that insurance companies are too stupid to protect themselves against the practice of consumers' replacing one policy with another. That is fairly unlikely, particularly as the replacement of one policy with another now goes on, and insurers have been nimble enough to discourage cancellation of those policies after a year or two, for example, by levying a "surrender charge" of 100 to 125 percent of the first year's premium. Such practices deter consumers who are trying to build up the cash value of a policy from cancelling policies.

Apart from those generalized defenses of rebating, the insurance lobby also has a beef with the specific fee-for-advice system that Mr. Katt would like to offer. Under his system, they argue, clients could end up paying several hundred dollars for his advice and be rejected by the insurer because they fail the physical examination. Stick with a traditional agent, who will provide you with sound advice for free, they argue. But people routinely pay professionals for their advice without achieving the desired result. For example, if one hires a lawyer to get a zoning variance, and the application is rejected, he still has to pay the lawyer. Besides, if rebating were legalized, nobody would be forced to deal with an agent who rebates, and anyone who wants the "free" advice offered by traditional agents can keep doing business that way. That ought to be a decision made by the individual, not the state.

Perhaps the best answer to the industry's opposition is provided by the practical experience of what has happened (or not happened, despite dire predictions) in Florida and California, where rebates are legal.

Florida led the way, thanks to a 1986 ruling by the state supreme court that declared that antirebate laws violated an agent's substantive due process rights under the Florida constitution. California followed suit, with repeal of the antirebate laws tucked away as part of the Ralph Nader-endorsed Proposition 103, which the voters adopted in November 1988. No one has cited a single insurance company that has failed on account of rebating in those two states, nor does there appear to be a consumer revolt against the limited rebating being offered by agents in those states.

Peter Katt has challenged Michigan's antirebate laws in court on grounds that were ultimately persuasive in Florida. Although he lost the first round, the case is still pending on appeal.

While that suit was stalled in court, Katt tried a new tack to tell Michigan consumers about how to save money and get better advice when buying life insurance. He announced in his newsletter and newspaper interviews that he was licensed to sell life insurance in Florida, and he offered to provide clients his fee-for-advice, 100 percent rebate service if they traveled with him to Florida and conducted the transaction there. For some people at least, the savings they would realize under this proposition would more than pay for airplane tickets and a hotel room.

That move provoked the Michigan thought police. In July 1990, despite four prior staff assurances that what Katt was proposing was perfectly legal, Attorney General Frank Kelley and former Insurance Commissioner Herman Coleman decided that such information was dangerous for consumers to have. They warned that Katt would be charged with "solicitation"—which could lead to yanking his license—if he continued telling Michigan consumers how much money they could save in Florida.

As a result, Katt can tell people only that rebating is legal in Florida and that he can do business there, but he is forbidden to tell them anything else about a possible transaction that is perfectly legal in Florida. He has filed a First Amendment challenge to this censorship that is also pending.

It is at best ironic, when formerly repressive regimes are suddenly receptive to new ideas from abroad, that Michigan has chosen not simply to defend the antirebate status quo, but to try to muzzle the spread of ideas that could empower Michigan residents (and others) to make more informed choices about an important consumer product.

The apathy, ignorance, and avoidance that characterize consumer attitudes toward life insurance generally have allowed antirebate laws to continue unchallenged, despite the competition and added

choice that would inevitably follow their abolition. Discounts and charging by the hour are facts of life in most professions. The question remains: why not in insurance?

Con Hitchcock
Public Citizen

Advancing the Cable-Telephone Company Debate

In the information services area, the forces of technology and international competition are forcing a shift in the way regulators look at the services the cable TV and telephone companies are allowed to provide. It no longer appears prudent to regulate future cable service and telephone service as two distinct products—one a mass media service, the other a common carrier service. As the digitization of information eliminates the transmission distinctions among voice, data, and video, it becomes increasingly difficult to separate industries such as cable and telephone on the basis of content; they are both competing transport facilities.

Recently, both cable and telephone companies have become more open about the potential synergies of their respective businesses. Telephone companies seem to be motivated to move into video services because projected earnings growth in their traditional telephone markets are low. Cable companies seem to be motivated to move into telephone and other information services to derive greater future earnings from their fiber and coaxial cable facilities.

An example of that synergy is the technical trial Bell Atlantic is conducting with Cablevision of Loudoun County, Virginia, using a new technology for delivering integrated digital voice and video signals over the same fiber optic cable. In addition, U.S. West and Tele-Communications, Inc., (TCI) are pursuing strategic joint venture agreements in the United Kingdom and contemplate further agreements outside of U.S. West territory. U.S. West, AT&T, and TCI are pursuing near video-on-demand trials in the Denver area. The cable industry has invested heavily to test the feasibility of providing personal communications over cable facilities. Thus, cable and phone companies are laying the groundwork to enter each other's business markets.

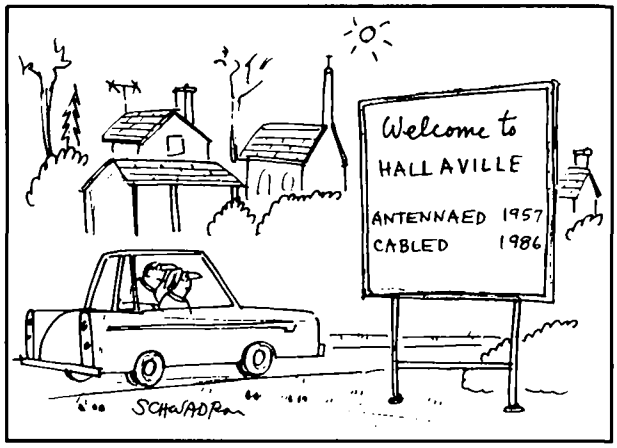
As innovations in fiber and compression technologies continue to improve the capacity of wireline facilities, the only remaining barriers to open competition between cable and telephone companies will be legal and regulatory hurdles. Thus, policymakers and regulators must continually evaluate the potential impact of those evolving technologies so that they can establish an integrated regulatory framework for the provision of video and information services.

Importance of the Debate

The key issue underlying the debate about what services cable and telephone companies should be allowed to offer relates to the modernization of the domestic telecommunications infrastructure. To promote efficient investment in that infrastructure, the United States must ensure that the markets for the provision of telecommunications and information services are open and competitive. In addition, the marketplace, not government edicts, should determine the appropriate technology mix. Government's role should be to ensure open, nondiscriminatory access as well as the reliability of basic telephone communication links and public safety.

There are several reasons for relying on the marketplace to determine the appropriate technology for modernizing the communications infrastructure. First, the marketplace must be free to experiment with other, new technologies that may meet the demands of consumers as efficiently as fiber optics. Indeed, advances in digital compression technology may make it possible to transmit video over existing copper facilities and thus could delay the need to deploy fiber optic cable to the home. For example, Bell Atlantic, New Jersey Bell, and AT&T announced that they would collaborate to test the use of asymmetrical digital subscriber line technology to provide new video services to schools in New Jersey. That technology allows video signals to be sent over copper wire with video quality comparable to that of video cassette recorders and audio quality comparable to FM radio.

Furthermore, the advent of new, mobile wireless technologies is forcing regulators to examine distinctions between cable and telephone company services. Mobile wireless communications



could be the wave of the future for voice and data connectivity. Future economies and technological efficiencies may result in voice services' being transmitted by narrowband radio facilities and video services' being transmitted by broadband, wireline facilities.

The unpredictable direction of future developments in technology and network architecture should compel the government to favor policies that allow the marketplace to function effectively. Only through a marketplace approach will proper infrastructure investment decisions be made. Regulators should not presume to know what consumer demand will be in the future or how that demand can best be met. Regulators should enable telecommunications service providers to test new services in the market and to offer customers the capabilities they desire with such services.

Another issue underlying the cable-telephone company debate relates to U.S. competitiveness in the global telecommunications marketplace. During the past several years, it has become increasingly apparent that to promote economic growth, other countries give high priority to the modernization of their telecommunications infrastructure. A key component of this modernization is the deployment of fiber optics in the telecommunications network. Japan's Nippon Telegraph and Telephone Corporation, which is investing heavily in digital switches and optical fiber, hopes to lay fiber optic cables to every Japanese home, school, and business by 2015. France has replaced nearly all of its analog phone switches with digital switches. France Telecom has attempted to jumpstart its Minitel information service by giving away home computer terminals. Germany, Singapore, and Hong Kong also have embarked on an aggressive fiber deployment program through their national telephone carriers.

Other countries' policies regarding the services cable and telephone companies can offer are more flexible than those in the United States. France and Germany have no cable-telephone company barrier. Britain has a modified restriction on cable-telephone company entry, but does not bar an affiliation through a separate subsidiary. Moreover, in 1994 British Telecom will be allowed to seek permission to provide programming to any unfranchised cable area. Although Japan and Canada have prohibitions on direct cable service by a telephone company, they do allow telephone companies to form consortiums with cable companies.

Because the AT&T antitrust consent decree (the Modification of Final Judgment) and the Cable Communications Policy Act of 1984 prohibit the Baby Bells from providing information services and cable video services, the regional Bell operating companies increasingly are making major investments in overseas cable ventures and telephone operations. Those companies currently have greater incentives and flexibility to invest overseas than to provide value-added services in the domestic local exchange markets. Their investment decisions are a result of regulatory restrictions. Policymakers and regulators need to be aware of those overseas incentives and should address that anomaly in a regulatory regimen as quickly as possible.

Regulatory Framework

When recommending substantive policies that should be pursued, as an FCC commissioner, I must operate within the statutory framework offered by existing law. Thus, I shall focus on issues that could be raised at the FCC and acted upon within the confines of the commission's authority under current rules and statutes.

Cable Act and Modified Final Judgment. Currently, telephone company entry into video and audio program delivery is limited by two documents: the Cable Communications Policy Act of 1984 and the Modification of Final Judgment that settled the government's antitrust case against the Bell System in 1982. The cable act applies to all telephone companies, with some rural exemptions. It generally prohibits telephone companies

from owning cable systems within their service areas. A telephone company serving a rural area can obtain a waiver, but only if the cable service would be otherwise unavailable to the rural area.

The Modification of Final Judgment applies to the Bell operating companies and AT&T. Before July 25, 1991, the Modification of Final Judgment precluded the Bell operating companies from owning any cable systems, even those outside their service areas or in rural areas. On July 25, 1991, Judge Harold Greene lifted the information services restriction on the Bell operating companies and GTE. After that decision, the Bell operating companies have had more flexibility to operate cable ventures outside of their service areas; however, they still must comply with restrictions that prevent them from providing interstate or intrastate long-distance service between local access transport areas.

Congressional Action. Sen. Conrad Burns and Rep. Rick Boucher have introduced bills that seek to stimulate modernization of the telecommunications infrastructure by allowing telephone companies to provide cable service. Those bills seek the deployment of fiber optic cable throughout the nation by 2015. In addition, Rep. Edward Markey is drafting legislation that would allow the Bell operating companies to conduct research on, design, and manufacture telecommunications equipment. Rep. Jim Cooper has introduced a bill addressing the need for competition among facilities-based information service providers in the local exchange market. Sen. Ernest Hollings has also introduced legislation to lift the manufacturing restriction of the Modification of Final Judgment. Until any of those bills is signed into law, the FCC will continue to operate under the present restrictions of the 1984 cable act and the Modification of Final Judgment.

Regulatory Role

Given the current statutory, judicial, and regulatory restraints, regulators evaluating the appropriate incentives for investing in telecommunications infrastructure should consider three areas: local exchange competition; federal-state cooperation; and local exchange investment incentives in the context of the cable-telephone company debate.

Local Exchange Competition Initiatives. One way to bring a modern public network to fruition, with the capabilities and broad accessibility such a network entails, is to encourage competition among facilities-based service providers. At the same time, public policy should encourage continued investment in and modernization of the public switched network. Within that framework, regulators should find ways to let that market work, while simultaneously protecting other values society considers essential.

To address the competitiveness side of the equation, regulators should ensure that all information service providers are given the incentive to invest in developing infrastructure. Service providers other than the Bell operating companies, for example, Metropolitan Fiber Systems and Teleport, should have the opportunity to develop facilities-based communications services. The FCC has addressed competition, pricing, and access issues in decisions involving expanded interconnection, open network architecture that permits all users of a network to interconnect to specific basic network functions and interfaces on an unbundled and equal-access basis, and the price-cap regulatory scheme. Those initiatives have increased the degree of competition in the market for local exchange and information services.

What has not been done at the federal level, to the same extent as has been done at the state level, is to address the other side of the competitiveness equation—to grant the local exchange carriers more regulatory flexibility to compete in the marketplace of the future. But if the local exchange carriers are to remain economically viable, maintain earnings growth, and remain capable of serving their customers, they must see themselves as something other than a regulated vendor of network piece parts. To have a strong economic incentive to invest in their network, they must have the prospect of marketing unique, custom-tailored, end-to-end telephone and information services.

Greater Federal-State Cooperation. Regulators must promote a policy of closer federal-state cooperation to develop the regulatory flexibility needed to adjust to changing market conditions across the country. The FCC should play a more aggressive ombudsman role in addressing the concerns raised by state regulators, particularly regarding the thorny economic and political issues raised by the cost of fiber deployment and

the concern for preventing cross subsidies. For example, regulators could conduct studies of economic return from fiber deployment if it is phased in on a strategic basis within the community and use the results to devise more innovative solutions to the issues surrounding infrastructure modernization and fiber deployment. Through cooperative efforts on the federal and state level, regulators will be able to devise effective, long-term solutions to the difficult costing and pricing issues associated with modernizing the infrastructure.

Investment Incentives. If regulators want to provide the local exchange carriers with an incentive to invest in the public switched network, they must see that those carriers have prospects for financial gain and some hope of controlling their destiny. That is the flip side of the policy debate surrounding local exchange competition initiatives.

One aspect of the infrastructure policy debate that affects the local exchange carriers' investment incentives is the cable-telephone company issue. The FCC cannot modify the cable-telephone company rules on its own. It must recommend to Congress whether the restrictions should be lifted. Within the confines of the cable act, the commission has allowed telephone companies to lease their lines and act as common carriers for other franchisees to provide cable service within their service areas. The FCC also has the ability to grant "good cause" waivers and rural exemptions. Under FCC rules, telephone companies may provide video programming outside their service areas, but the Bell operating companies cannot violate the consent decree's restriction on providing long-distance service between local access areas without a waiver.

Conclusion

The exact design of the future telecommunications infrastructure remains unclear. But uncertainty should not preclude progress. Regulators must continue to address the tough costing, pricing, and jurisdictional issues raised in the cable-telephone company debate. Also, federal and state regulators must work together to develop innovative models that can provide long-term solutions to the costing and pricing concerns raised by debates about modernizing infrastructure. Our country cannot afford to be deprived of a modern telecommunications infrastructure because of interindustry politics or fractured public policy debates. Regulators and policymakers must meld their concerns into a flexible regulatory model that will allow U.S. industry to compete effectively in the global marketplace.

Andrew C. Barrett
Federal Communications Commission

Politically Correcting Pesticide Exports

In the sub-Saharan rain forests of Zambia, a U.S.-made pesticide is being applied to eucalyptus seedlings to save them from the ravages of termite infestation. Eucalyptus trees grow rapidly and therefore are useful not only to Zambian, but to worldwide reforestation efforts. The same pesticide is also being considered by the World Health Organization as a substitute for DDT to kill the mosquitoes that carry malaria. It is also being used in former President Jimmy Carter's Global 2000 Program because it dramatically increases yields of vital crops in underdeveloped countries and at the same time reduces growers' chemical exposure.

The main ingredient or "active" chemical for this pesticide is produced only in Institute, West Virginia. But, like many other U.S. made pesticides, this product, known as carbosulfan, is currently among a group of pesticides that are the target of legislation to prevent their export from the United States. If so-called circle-of-poison legislation passes Congress, chemicals that are not registered with the Environmental Protection Agency for use in the United States could not be exported for use in other countries. Depending on estimates, the restriction could include as many as sixty-six separate products and could account for upwards of $450 million in annual export volume from the United States and for the loss of approximately 23,000 jobs. Although registered in forty other countries, carbosulfan would have to be produced offshore or to obtain a U.S. registration for foreign growers to continue to benefit from its use.

Led by the international environmental organization Greenpeace, the coalition supporting the legislation argues that pesticides that have not

been proven safe for use in our country should not be exported to unsuspecting third world countries. Ironically, many of the proponents of the legislation are also at the forefront of efforts to encourage worldwide reforestation, to find substitutes for DDT in the fight against malaria, and to protect third world growers from needless chemical exposure.

Nonetheless, proponents of this particular form of environmental imperialism argue that those unregistered pesticides may find their way back onto U.S. dinner tables in the form of illegal pesticide residues on imported foods and thus close a "circle of poison." The coalition also contends that unsuspecting farmers in third world countries can become the victims of those "illegal poisons." Meanwhile, they argue that domestic farmers are put at an unfair competitive disadvantage because they cannot use pesticides that are not approved for use here.

Moreover, recognizing that such a law would exceed currently accepted international standards governing the trade of pesticides, circle-of-poison advocates have suggested that Congress should enact such a prohibition so that the United States can set the international example. Proponents thus argue that it has become a moral imperative for the United States to judge what pesticides made in our country are suited for use in other countries as a way of setting the international paradigm.

Although approximately 75 percent of the world's pesticides are produced offshore, we are to impose our postindustrial, risk-averse standards on emerging industrial countries, where plague and famine remain more than just Biblical scourges. Under that scenario, barring the export of any unregistered U.S. product becomes the "politically correct" approach to exporting pesticides.

The Worldwide Benefits of U.S. Pesticides

Indeed, global pesticide trade is a policy area where the United States can and should provide leadership. But leadership requires carefully considering the full consequences of public policy. And the consequences of a far-reaching ban on U.S. pesticide exports may prove environmentally as well as economically shortsighted.

Under the U.S. law that governs pesticides, the Federal Insecticide, Fungicide, and Rodenticide Act, it is unlawful to sell, distribute, or use a pesticide in the United States that has not been registered for use here by the EPA. But that law does not prevent the export of chemicals that may be made here, but are used to treat pest, soil, or other climatic conditions that are endemic to other countries. While the act requires companies to disclose the country to which those products are exported, it clearly recognizes that the importing country can best judge its own agricultural and environmental conditions.

Such was the case in Zambia and throughout central Africa upon discovery of the U.S.-made product carbosulfan. The role of eucalyptus trees in overcoming problems associated with deforestation is important in developing economies, where trees are used for fuelwood as well as for building materials and industrial purposes. In fact, the developing countries' consumption of fuelwood is estimated to account for over half of the wood used in the world each year.

The demand for additional supplies of fuelwood is so enormous that to meet the demand in sub-Saharan Africa alone, the current reforestation effort must increase by one hundredfold. Yet, one of the barriers to faster reforestation is termite infestation of eucalyptus trees. Both in Africa and in South America, different, but no less deadly species of termites are known to ravage eucalyptus seedlings.

In attempting to control those termite scourges, developing countries have traditionally turned to the use of pesticides known as organochlorines. But recently some of those products, such as aldrin and dieldrin, have come under question and have been banned outright for use in some countries. In light of those circumstances, the Zambian government chose to use the unregistered U.S. product carbosulfan, which it regarded as safe to users and the environment, in its reforestation effort. Other developing nations have also considered environmental, climatic, soil, and pest conditions as well as human health and safety needs to determine the appropriateness of using specific pesticides.

Those decisions belie the environmental imperialists' concept of the underdeveloped nations' capacity to make informed judgments for themselves. For example, a registration application for the very same carbosulfan was denied in Malaysia owing to specific concerns regarding its impact on their unique environment. Thus, the decision to allow or disallow the use of a pesticide in less developed countries is not, as some in the advanced countries would have us believe, based simply on product efficacy. To assume such, as

circle-of-poison legislation suggests, is unjustifiable. When the worldwide losses of food before harvest are estimated to be as high as 35 percent and when over 13 million people will die from starvation this year, it is presumptuous for the United States to dictate third world use of agricultural technology that might save lives or improve local environmental conditions.

The U.S. Pesticide Registration Labyrinth

It is mistaken to suggest that U.S. pesticide registration standards are more stringent than those in other advanced countries. According to the agricultural chemicals industry, it typically takes eight to ten years and costs manufacturers $35 million to $50 million to bring a new pesticide to market under U.S. registration standards. The lengthy registration process only begins after the significant investment to discover the single effective molecule from approximately 10,000 tested that would appear to have some promise as a commercial pesticide.

Most of the registration expenditure is for the range of animal feeding, toxicology, and environmental effects studies required by the EPA. Because of the lengthy and ill-defined nature of the U.S. pesticide registration process, it is not uncommon for a product to become registered in several other advanced countries while it is awaiting approval in the United States. For example, the Dow product haloxyfop, an herbicide to control wild grasses, has obtained registration in thirty-four countries including Germany, Belgium, France, Norway, and Australia while application has been pending before the EPA. Dow has submitted over seventy-two research reports to the EPA (some with as many as 110,000 separate data points), engaged over eighty of their own scientists, and used twelve top scientific laboratories, but has yet to receive a U.S. registration.

Similarly, in 1983 the FMC Corporation began the long, expensive process of obtaining a registration for carbosulfan, the very product that is now saving eucalyptus trees in the sub-Saharan rain forests. FMC had already spent several years researching and developing the product before beginning the EPA registration process.

In its labyrinthine complexity, the U.S. pesticide registration process approximates an amusement park hall of mirrors, full of twists and turns, in which a potential registrant often retraces its steps and seems to be always going in circles. The EPA often calls for redundant health and environmental effects testing, studies to corroborate earlier studies, and environmental effects testing on specific ecosystems. The regulatory definition of what constitutes an adequate test is sufficiently ill-defined to allow the EPA to challenge findings of studies even after the agency has approved the test protocol and the laboratory where the research is being done.

By 1987, after some $15 million in testing, the EPA had concluded that carbosulfan was nonmutagenic, had no teratogenic effects, had no adverse effects on reproductive performance, was not carcinogenic, and had no delayed effects on neurological activity. Yet, the EPA continued to require additional testing of carbosulfan.

Meanwhile, during that same four-year period, using the same test data, FMC achieved registrations in eleven countries that are members of the Organization of Economic Cooperation and Development. As was found in a recent EPA analysis of the comparability of OECD registration standards with those in the United States, OECD countries typically require testing for acute toxicity, chronic toxicity, carcinogenicity, teratogenicity, mutagenicity, and neurotoxicity. They test for acceptable residue levels on crops and for toxicity to birds, fish, and other wildlife. But registration procedures in those countries tend to be better defined with clearer end points, as opposed to the much criticized, open-endedness of the U.S. system.

Today, the registration application for carbosulfan, like many other U.S.-made pesticides, is still pending at the EPA. But faced with an expenditure of up to an additional $20 million for test data to satisfy EPA requirements, FMC has chosen not to pursue its pending registration. The decision is based on weighing additional registration costs against the prospect of a viable domestic market—a market that has during the registration process become crowded with additional competition.

The complex, time-consuming nature of the U.S. registration system is only one of several reasons why a product made in the United States may not be registered here. In many cases pesticides are produced for crops not grown commercially in the United States or for soil, climatic, and pest conditions not found here. Manufacturers thus do not seek EPA registration.

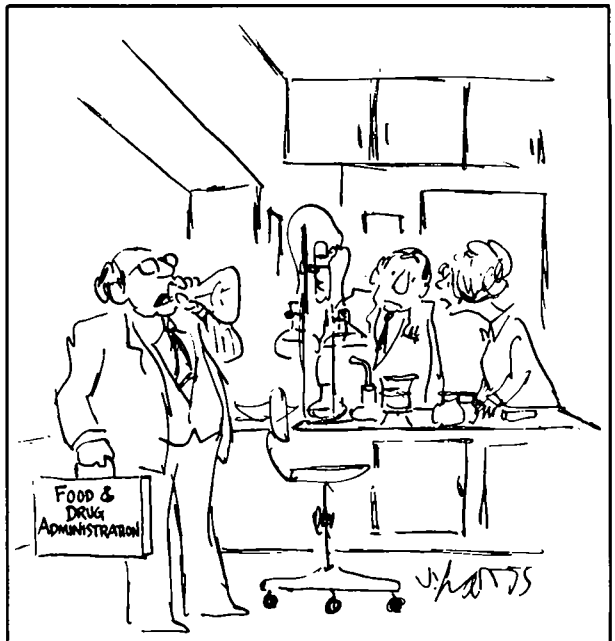
The Challenge to Sovereignty

Advocates of unilateral restrictions on American pesticide exports contend that the regulatory infrastructure of third world countries is inadequate to judge the potential health or environmental consequences of specific products. But typically, the developing countries require pesticide imports to be registered in one of several advanced countries—not necessarily the United States. For example, developing countries in Africa tend to require registration in their former colonial overseers.

The presumption that the United States has the most exacting pesticide standards is not necessarily correct. For example, West European countries have more stringent requirements regarding the effects of pesticides on groundwater than those imposed by the EPA. In addition, there are other highly specific, localized differences among the testing requirements of various countries. For example, Australia has extensive soil residue and monitoring requirements. Canada requires strict wildlife impact assessments for registration. The Japanese emphasize fish metabolite studies. Norway requires that the product pending registration demonstrate that it is as least as efficient in pest eradication as any competing product currently on the market. The United Kingdom focuses on the potential for aquatic toxicity.

In attempting to impose risk-free standards on third world countries, the United States fails to consider the fact that developing countries view the use of agricultural technology in different terms. Although developing countries need pesticides to fight malnutrition, the benefits of pesticide use are not limited to food production. Pesticides also play an important role in the control of pests and rodents that cause epidemic disease. For example, in India, Pakistan, and eighteen African countries, approximately 10 million people each year succumb to Guinea worm, a devastating infection that causes extreme pain and disability. Recently, rice farmers in southeastern Nigeria have lost more than $20 million in profits annually because so many of them were incapacitated by the disease.

Even in those cases where pesticides have lost their registration in what the EPA refers to as a cancellation proceeding, the benefits of continued use in other countries is often compelling. DDT, which has been banned in the United States since 1972, is still produced in at least six countries for use around the world and remains perhaps the most potent weapon available against the mosquito species that transmits malaria.



"I thought he would run all sorts of scientific tests."

A unilateral export ban by the United States will not result in cessation of the use of identical or similar products abroad. Other countries will continue to impose their own versions of risk-benefit analysis to the pesticides they intend to use on the basis of their own unique conditions. And they will be able to pick and choose widely from a variety of pesticides not made in the United States.

Defining the Issue

So, what then do the authors of the circle-of-poison legislation hope to accomplish? Is there a threat to the U.S. food supply, foreign growers, or U.S. farmers resulting from our export of those products? And if there is, how can we stop it when those pesticides or less safe alternatives will continue to be made and used abroad?

The Food and Drug Administration is responsible for inspecting and analyzing imported food. A major impetus for circle-of-poison legislation seems to be the discovery that 3.5 percent of the 18,000 imported food samples taken by the FDA in its annual monitoring and surveillance program reveal pesticide residues that violate U.S. standards. This means that those products are not within the legally allowed "tolerances" for pesticide residues.

The EPA established tolerances for pesticides on the basis of stringent risk assessments that purport to show how much of a specific pesticide residue an individual can safely consume over a lifetime. The agency establishes an acceptable daily intake level to account for the cumulative effect of consuming several different products with the same pesticide. U.S. pesticide manufacturers must obtain a legal tolerance on every food commodity on which the product is used. Because the pesticide manufacturer cannot violate the total intake level for his product, a pesticide may have a tolerance for use on corn, but not on soybeans. The pesticide producer must make decisions on product use on the basis of anticipated consumption and mathematical determinations of relative risk.

In this context, it is therefore noteworthy that while 3.5 percent of the imported foods sampled violated standards, only one-half of one percent contained a pesticide residue for which there was no established tolerance for any food commodity. Thus, 3 percent were samples for which tolerances existed on other foods (2.5 percent) or for which the residue level detected exceeded the established tolerance for that specific food (.5 percent). Nonetheless, in those latter two categories the pesticide itself was clearly judged to be safe and had a tolerance. Thus, the entire commotion around the circle-of-poison debate results in large part from only 90 (.5 percent) out of 18,000 products sampled for which there were no tolerances on any crop use. And even there a tolerance petition may be pending.

But even if one believes that a problem of that magnitude constitutes a priority public policy issue, its solution does not lie in banning exports of U.S.-made chemical products. Our pesticide production is about one-fourth of the world's total. Of the top ten pesticide manufacturers, only four are U.S.-based. Thus, we can expect the availability of products that do not meet U.S. standards to grow if U.S. pesticide exports decline. In addition, we can expect circle-of-poison legislation to shift additional U.S. production abroad and cause American farmers to rely increasingly on imported pesticides. Since imported pesticides cost on average 40 percent more than U.S.-made products, farm production costs would rise and make U.S. farmers less rather than more competitive. Thus, U.S. farmers will not have a level playing field.

Similarly, a ban on the export of unregistered pesticides is not an effective policy approach to improving the safe use of pesticides by farmers abroad. To encourage the safe handling and use of pesticides, particularly in third world countries, pesticide producers and a range of international organizations including the Food and Agricultural Organization and the United Nations Environmental Program have initiated stewardship programs that provide training manuals, multilingual label instructions, and grower application seminars.

A Multilateral Solution

The food safety, worker exposure, and level playing field issues raised by advocates of circle-of-poison legislation do not lend themselves to a simplistic unilateral solution. In addition, U.S. companies should not be expected simply to set an example that other nations will not follow. Pesticide export policy should address how best to inform nations of the risks and benefits associated with pesticides that are used on foods grown domestically or imported but that may be made elsewhere. Such an approach respects the capability of sovereign nations to make decisions for themselves.

At the heart of such a solution to the problem is the Food and Agricultural Organization's "International Code of Conduct on the Distribution and Use of Pesticides," which provides for the exchange of information between countries that are shipping severely restricted or extremely hazardous pesticides. Specifically, the code enables an importing country to refuse shipments of pesticides that are banned or severely restricted so as to protect human health or the environment.

If the United States is deficient in complying with that policy, the deficiency stems from the EPA's current inability to stop the shipment of pesticides from the United States that are denied by an importing government. For example, it is still possible for manufacturers to ship chlordane or heptachlor, chemicals that have lost their U.S. registration, from U.S. ports to say Honduras, even when the Honduran government indicates that it does not want to receive those shipments. The EPA should have the authority to impound such shipments so that the United States can comply with the Food and Agricultural Organization's prior informed consent system.

The United States should also strengthen its current system for monitoring the number and type of unregistered pesticides shipped from our shores.

Current law requires U.S. pesticide manufacturers to receive a purchaser acknowledgment statement for shipments of unregistered pesticides. That statement is used to notify foreign governments that such a pesticide is being exported to their country. But the GAO recently reported that the EPA received statements for only 26 percent of the 262 unregistered products exported from the United States from 1985 to 1987. While it may be difficult in some instances for U.S. producers to obtain such statements, they should be in a position to voluntarily report what unregistered chemicals are exported, where the products are used, and on which crops they may be found.

In addition, the United States should increase the quality and quantity of U.S. food import inspection. Currently, the FDA has pesticide residue detection methods for approximately 270 different pesticide residues that may appear on imported U.S. foods. Critics believe that this is woefully short of the total number of pesticides that may show up and that many dangerous chemicals may escape FDA detection methods. To assist the FDA, U.S. pesticide producers should provide the agency with a means of detecting residues of those "unregistered" pesticides that it manufactures here but exports abroad. Such detection methods can be both expensive and time-consuming to develop. In many cases, however, they already exist, and where they do not, their development will help to establish consumer confidence that any imported foods with violative residues from U.S. exported chemicals can be detected.

The amount of FDA monitoring ought to increase as well. The FDA has been criticized, perhaps unjustifiably, because its total sample of imported food shipments represents less than 1 percent of what we import. The FDA, however, has developed considerable expertise in targeting specific types of shipments where violative residues may be found. The agency conducts special selective surveys each year on certain target crops and chemicals. For example, in 1989 the FDA focused its efforts on aldicarb, a widely used pesticide that is under review in the United States. But at the same time, a major increase in the number of samples taken by the FDA would send an unmistakable signal to foreign exporters on the intent of the U.S. government to crack down on those who seek to violate U.S. import laws.

Finally, the United States should play a leadership role through its ongoing effort to harmonize international food safety standards. Discussions under the current round of GATT negotiations are focusing on harmonizing international food tolerances. Indeed, a system for establishing internationally accepted standards for pesticide residues on foods already exists under the auspices of Codex Alimentarius Commission, a subsidiary body of the Food and Agricultural Organization and the World Health Organization, comprising government officials from some 130 countries. While the Codex system contains over 2,000 maximum residue limits, those standards act only as general guidelines that countries may now ignore if they choose to do so. If a truly level playing field is to be created in agricultural as well as pesticide trade, then such an international system of broadly accepted food safety standards must be agreed to internationally and enforced at a minimum in the advanced countries.

Unfortunately, taking a series of discreet actions such as providing stop-shipment authority, requiring a means of residue detection, stepping up FDA enforcement, and harmonizing international food safety standards does not lend itself to the same impassioned political rhetoric as does promoting the circle-of-poison approach to curtailing the export of pesticides. But, as with other issues commanding international solutions to global environmental concerns, the United States should resist the domestic political temptation to superimpose its own standards on the world through an ill-conceived, unilateral approach that ignores the sovereignty of other nations and the reality of the global marketplace. Politically correcting pesticide exports requires mustering the domestic will to approach the issue in a way that recognizes the varied benefits pesticides play internationally and the different standards other countries use to judge their safety.

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EPA Steps up "Inforegulatory" Radon Campaign

The Environmental Protection Agency has stepped up its "inforegulatory" campaign against radon with its June publication of a revised *Citizens' Guide to Radon*, which suggests that the current "action level" be reduced 100 percent, from

four to two picocuries per liter. "Our research and the experience of private mitigation firms shows levels can be reduced below two picocuries per liter 80 percent of the time," Steve Page, acting director of the EPA's radon office, said.

The EPA's campaign does not enforce the four picocuries per liter "action level," although it promotes it through an arsenal of public relations activities. The "action level" does not qualify as a regulation as such, for radon, as a natural danger, presents the EPA with what officials have described as a "nonregulatory challenge." Consequently, the EPA has an "inforegulation" program—a word borrowed from "infotaintment" programs on television. As such, the *Citizen's Guide* was not reviewed by the Office of Management and Budget and the Council on Competitiveness, although the cost of meeting the action level has been estimated at $1 trillion.

"It may cost a trillion dollars as you say," an OMB spokesman said, "but since it's not a regulation, we don't review it." The federal deficit is currently $2 trillion; federal spending on urban poverty in the quarter century between 1965 and 1990 has been estimated at $3.38 trillion.

The trillion dollar figure comes from both internal and external criticisms of the EPA, notably "Radon Today: The Role of Flimflam in Public Policy" by Philip Abelson (*Regulation*, Fall 1991) and "Indoor Radon: Exploring U.S. Policy for Controlling Human Exposures" by William Nazaroff and Kevin Teichman, a top EPA official (*Environmental Science & Technology*, June 1990). Both make essentially the same points, but Teichman and Nazaroff's comments also cast doubt on Page's assertion that mitigation levels can easily be reduced below two picocuries per liter. "Most of the mitigation experience in the United States is too recent to yield reliable experience on the long-term efficacy of remedial measures," they state. "Substantial improvements in radon measurement and mitigation . . . even if technically feasible, would be prohibitively large, on the order of $1 trillion [roughly estimated at $10,000 to $16,000 per household times 70 million households]."

On the benefit side of the cost-benefit equation, the EPA's estimates of the lives saved, as a consequence, has varied from 43,200 to 16,000 a year. The actual range is between 500 and 1,450 among nonsmokers, estimate the Lawrence Livermore Laboratory's Nazaroff, perhaps the most widely cited authority on radon in the scientific literature, and Teichman, coordinator of the EPA's indoor air quality research program. "[M]ore than 90% of the lung cancer risk associated with radon could be controlled by eliminating smoking without any changes in radon concentrations," Nazaroff and Teichman wrote.

Nazaroff and Teichman called for the steady development of radon expertise "rather than a boom-bust cycle . . . reassessment through a means that discourages discussion and debate." No such discussion and debate have been given radon within the agency although EPA administrator William K. Reilly recently called for a complete revamping of the agency's personnel policies to develop a "coherent agenda to guide scientific efforts throughout the agency," based on agency-wide peer review.

The EPA, however, has not formally reviewed the scientific literature on radon. An initial survey of dozens of scientific studies both in the United States and abroad by the Congressional Office of Technology Assessment reveals little evidence of significant risk from residential radon. Instead, the EPA has unleashed its arsenal of public relations activities, designed in the words of Margo T. Oge, the EPA's director of radiation programs, as "prudent and responsible public health policy" (*Science*, March 6, 1992).

Between $18 million and $20 million are being spent on the radon program, according to Page. Half is going for research and remediation activities. The other $9 million to $10 million cover for "clever and humorous" public service announcements on television (*EPA Radon Bulletin*, Spring 1992), employment of state radon program directors and development of "high risk targeting strategies," grants to American Lung Association affiliates, building design competitions, a National Civic League "participatory government" handbook, National Association of Counties workshops and calls for strengthened federal radon legislation (including mandatory radon real estate disclosure and school testing), a draft *Homebuyer's and Seller's Guide to Radon*, and an American Medical Association documentary plus T-shirts, baseball caps, and adhesive jar cap removers emblazoned with the slogan, "Radon—Gets You Where You Live; Call or Test Today, 1-800-SOS-Radon"—all paid for by the EPA.

Coincidentally—or ironically—EPA administrator William K. Reilly has recalled the late President John F. Kennedy's "invoking the wonders of science" in calling for "a coherent agenda to guide

scientific efforts throughout the agency." Reilly prefaced his proposals for revamping the agency before the House Committee on Science, Space and Technology with the observation: "Environmental issues garnering headlines and turning into the latest horror story on the evening news often influence environmental policy in this country. . . . Public policies therefore sometimes seem to lack ballast and as a result veer from one point of view to another, seemingly without an underlying rationale. . . . These horror stories reflect the difficult and often contentious role of science in a regulatory agency such as EPA."

There is no dispute, however, as Reilly said, "Our society is being forced to make enormously costly decisions on a very small science base. . . . American investment in environmental control and clean-up is substantial—on the order of $115 billion a year, nearly 2 percent of gross national product."

The costs of radon mitigation, unlike other environmental pollutants, are not borne by manufacturers and distributors of products. Radon presents instead "a nonregulatory challenge" in the words of A. James Barnes (*EPA Journal*, August 1986). "The indoor radon problem does not lend itself to a regulatory approach. First of all, radon is a naturally occurring substance. It unmistakably poses a risk, but a blameless risk. There is no one at whom one can point an accusatory finger and say, 'You did this, you fix it.' "

Barnes underestimates "creative legal minds," according to Washington, D.C., attorney Laurence S. Kirsh, an authority on legal aspects of indoor air pollution. "Creative legal minds can construct new claims of causation that point the finger at some solvent party," Kirsh wrote. "A plaintiff can sue the company that weatherized the building so tightly that radon could not escape, or the contractor who laid the foundation with the crack that allowed the radon to seep into the building. . . . Of course, in those jurisdictions in which the building is considered a product subject to strict liability law, a plaintiff could allege that a building with excessive interior concentrations of radon itself is a defective product for which its builder is strictly liable."

The draft homebuyers' guides, support for strengthened federal legislation, "participatory government" handbooks, and school programs create "state of the art" knowledge that can and will be factored into real estate transactions as well as insurance costs. The Indoor Radon Abatement Act currently calls for efforts to reduce indoor radon levels to those prevailing outside. That is inherently impossible since building structures, by their very nature, trap radon gases coming out of the earth. In addition, legislation that would make radon disclosure mandatory in most real estate transactions and require school testing has passed the Senate and is pending in the House.

"It started with a simple case of peer review."

The basic reforms urged by Reilly, if implemented now, might substantially reduce, if not eliminate, those costs by focusing the EPA's emphasis on science rather than on regulatory or "inforegulatory" activities. Perhaps the two most significant reforms are publishing an agency "Science Agenda," "listing the priority issues that will become the focus of EPA's science activities," and instituting an agencywide peer review policy and system that will "require independent, external review of all major science projects . . . to ensure research and field studies are planned with the outside science community."

The most sweeping and comprehensive change would be the most basic one—establishing a career track for scientists and engineers "based solely on the quality and quantity of published science." Advancement beyond midlevel positions—GS-12 and GS-13 levels—into senior and

supergrade civil service positions—GS-14 through GS-18 levels—is currently restricted to management positions. Only one scientist is reported to be employed at the GS-15 level, the top of the regular career service. Many scientists report to superiors with bachelor's degrees in English and the social sciences, superiors who have been known to take advantage of rank to attend scientific conferences in Europe and other attractive locales.

Further, under Reilly's proposal the agency, recognizing its "lack of a critical mass of externally recognized scientists," would plan to recruit "four to six research scientists and engineers with world-class reputations." The chosen researchers would occupy the "equivalent of several 'endowed chairs of science.' " Informal recruitment is supposed to begin immediately for positions in "global climate, biotechnology, systems ecology, toxicology, biological diversity, and epidemiology."

In addition, to ensure that policy decisions "are informed by a clear understanding of the relevant science," science advisors would be appointed for the administrator, the assistant administrators, and regional administrators of the agency. The primary purpose would be "implementing our new peer-review policy and documenting its effectiveness."

Acceptance of peer review could bridge a bitter schism, known as "the lawyers vs. the scientists," which has divided the agency since it was first created by executive order of then President Richard M. Nixon a generation ago. The agency still lacks an organic law and, consequently, responds to the often media-driven demands of eighty-two congressional committees and subcommittees.

The unusually candid comments of the EPA Science Advisory Board members who researched and wrote the report on which Reilly based his recommendations underline the significance of peer review, in both policy and personnel matters. Dr. Raymond C. Loehr of the University of Texas, Dr. Bernard Goldstein of Rutgers, Dr. Amil Nerode of Cornell, and Dr. Paul G. Riser of the University of New Mexico wrote: "EPA has not always ensured that contrasting, reputable scientific views are well explored and well documented from the beginning to the end of the regulatory process. In addition, the agency is perceived to have a conflict of interest because it needs science to support its legal activities. The legal process fosters the presentation of the extremes of scientific opinion. This runs contrary to the preferred process of developing consensus within the scientific community."

The advisory board also pointed out that "EPA's science is *perceived* by many people, both inside and outside the agency, to be adjusted to fit policy." They indicated that the scientist or decision-maker could make such "adjustments" consciously or unconsciously. In addition, they noted, "EPA scoping studies or other preliminary assessments . . . sometimes escalate into regulatory policies with no further science input, leaving EPA initiatives on shaky scientific grounds and affecting the credibility of the agency."

One comment, more than any other, illustrates how far the agency must go before it can gain credibility within the scientific community and also serves as a damning indictment of past—and apparently current—conditions and circumstances. The EPA Science Advisory Board asserted, "The agency must promote an atmosphere in which the scientific staff feels free to express conflicting opinions and judgments *without fear of reprisal*" (emphasis added).

"The fact that fear of reprisal even has to be considered illustrates the depth of the problem," the U.S. Geological Survey's Dr. Malcolm Ross, a longtime critic of the agency's asbestos policies, said. "Getting the mothers to form vigilante mobs and storm the school committees" formed the basis of the EPA's policy direction for years, according to former EPA administrator William Ruckelshaus. The EPA now officially encourages management-in-place asbestos programs rather than removal as "the final solution." Nevertheless, both the Library of Congress and the Smithsonian Museum, located less than a mile away from EPA headquarters in Washington, have been forced to close down facilities in recent months because of panic over asbestos.

"What is really important about science is that it's constantly changing," Ross said. "Scientists, of course, should be free to express opinions about the changing science. But if there isn't any mechanism to make regulation reflect the changes in science, it just isn't useful—no matter how 'wonderful' it may be. We'll always remain stuck in the time period when regulations were first formulated, regardless of new scientific knowledge. There'll never be an open atmosphere; we'll always be stuck in the back rooms."

Ross, a former president of the Minerological Society of America, pointed out that "as matters now stand, it takes an act of Congress or a court

decision to change an EPA rulemaking." He concluded that if EPA policies do not reflect the science, "the 'wonders' of science Reilly called for in his proposal are just so much Alice in Wonderland."

Michael J. Bennett
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The Costs of Regulation (continued)

Several issues ago, in this column, I reviewed the major study by Robert Hahn and John Hird on "The Costs and Benefits of Regulation" (*Yale Journal on Regulation*, Winter 1991). That study concluded that the annual *net* cost of federal regulation was about $44 billion in 1988. My review of that study and other types of evidence led me to conclude that "the upper bound on this cost may be as much as 10 times higher." Several other recent studies, fortunately, have contributed to a better understanding of the issue. We are still far short of the type of information that would be necessary to establish a regulatory budget, but progress is being made.

The Total Cost of Federal Regulation

Our friendly competitor, the National Chamber Foundation, recently published a study of "The Costs of Federal Regulation" (*Journal of Regulation and Social Costs*, March 1992). That study was prepared by Thomas Hopkins, the former deputy director of the OMB Office of Information and Regulatory Affairs and now a professor at the Rochester Institute of Technology. The Hopkins study used the two major prior studies (by Robert Litan and William Nordhaus for 1977 and by Robert Hahn and John Hird for 1988) as building blocks but differs from those studies in three important ways:

- the Hopkins study focuses on the *total* costs of federal regulations, not the difference between the estimated costs and benefits
- Hopkins also includes an estimate of the costs of "process regulation," the annual cost of the paperwork burden imposed by the federal tax system and regulations
- the Hopkins study also provides rough estimates of the total annual costs of federal regulations for each year from 1977 through 1990 with projections (based on *existing* regulations) through 2000.

Table 1: Annual Costs of Federal Regulations

Type of Regulation	1977	1990	2000
	Billions of 1988 Dollars		
Environment	41	99	167
Other Social Regulations	25	29	47
Economic Regulation			
Efficiency Costs	87	46	46
Transfer Costs	181	95	95
Process Regulation	100	122	137
Total	433	392	492

This new study, by its nature, reflects most of the limitations of the prior studies. Most important, estimates of the costs of regulations are subject to considerable error, and some types of federal regulations are not covered. There are several important reasons, however, to focus on the total costs of regulation:

- the total costs of regulation are more nearly comparable with federal budget outlays
- estimates of the benefits of regulations are subject to substantially larger errors than the estimates of costs, and
- most important, there is considerable uncertainty about the extent to which the transfers resulting from economic regulation are offset by the costs (in lobbying, litigation, and campaign contributions) to gain or avoid political approval of these regulatory transfers.

For these reasons, the Hopkins study should be regarded as a complement, not a substitute, to the several prior studies on which it was based.

The bottom line is that the total cost of federal regulation was about $400 billion in 1990, around $4,000 per household. The larger set of results from the Hopkins study are summarized in Table 1.

Those results reflect five general patterns. The cost of federal environmental regulations more than doubled since 1977 and will continue to increase rapidly through 2000. The cost of other federal social regulation increased slowly since 1977 but will increase more rapidly through 2000.

The substantial reduction of economic deregulation since 1977 reduced both the efficiency and transfer costs by about 50 percent. The costs of federal process regulations are large but have increased, and are expected to increase, at a slow rate. The total costs of federal regulation declined about 10 percent since 1977 but are expected to increase about 25 percent by 2000.

The Hopkins study, in summary, is a major step toward developing a regulatory budget. Those who are interested in more detail should read the full study and the major prior studies on which it is based.

The Effects of Regulation and Deregulation on Economic Growth

Two other recent studies provide much more accurate estimates of the effects of specific regulations or deregulatory measures on economic growth.

An article by Dale Jorgenson and Peter Wilcoxen, two Harvard economists, provides the most careful estimates of the relation of "Environmental Regulation and U.S. Economic Growth" (*RAND Journal of Economics*, Summer 1990). That study provides detailed estimates of the effects of environmental regulation for thirty-five industry groups as well as for the total U.S. economy. The authors conclude that environmental regulations reduced the annual growth of real GNP by .19 percent from 1973 to 1985 and that the long-run cost of those regulations implemented by 1985 is about 2.6 percent of GNP. That estimated cost is about one-third higher than the EPA estimate on which the Hopkins study was based. Environmental regulations implemented since 1985 would increase the estimate; the Clean Air Act Amendments of 1990, for example, are expected to cost around .5 percent of GNP when fully implemented. The annual cost of environmental regulations approved to date may already exceed $175 billion.

Finally, a January 1992 study by the Interstate Commerce Commission provides the best estimates of the effects of the several deregulatory measures initiated beginning in the late 1970s on the productivity and real output prices of the affected nonfinancial industries. That study was supervised by Howard Face, the director of the ICC Office of Economics. Those estimates are based on the revised data on gross product by industry through 1989, prepared by the Department of Commerce and released in April 1991.

Table 2: Effects of Deregulation on Specific Industries

Period	Productivity R	Productivity D	Real Prices R	Real Prices D
	Annual Percentage Change			
Industry				
Railroad	4.2	6.5	0.0	-6.2
Trucking	-2.5	0.9	3.3	-2.8
Airlines	-0.8	2.1	2.2	-3.4
Ocean Shipping	-1.5	-0.2	1.4	-6.1
Utilities	-1.4	-0.4	5.7	-2.5
Pipelines (except gas)	-0.1	0.3	9.5	-5.4
Telephones	3.4	0.8	-2.8	-1.9

The results of that study are summarized in Table 2. The productivity measure is the annual percentage change in total factor productivity (including labor, capital, and intermediate inputs). The real price measure is the annual percentage change in output prices minus the general inflation rate on gross domestic product. For each industry, the two periods are from 1978 to the year of partial or full deregulation (R) and from that year through 1989 (D).

The patterns of the results are striking. For every industry other than telephones, total factor productivity increased at a higher rate (or declined at a lower rate) in the period since partial or full deregulation. Moreover, the change in productivity growth was highest for those industries (railroads, trucking, and airlines) for which deregulation has been most complete. In addition, real output prices declined for every industry since the year of partial or full deregulation; for telephones, however, the decline in real prices was not so high as in the years before partial deregulation. That evidence should be sufficient to end the recurrent pressures to reregulate some of those industries. More on those issues in the summer issue of your favorite magazine.

W.N.