UTILITY RESPONSIBILITY FOR PROTECTION OF THE ENVIRONMENT

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About a year ago when I spoke as Under Secretary of the Department of the Interior, I observed that

> The electric industry in my judgment will be measured as much by its effect upon the quality of our environment as by its ability to provide economical and reliable energy. I am optimistic enough to believe that, whichever yardstick is applied, will measure up.

A year ago my viewpoint was that of an official in a federal department which has important legal responsibilities to protect the natural environment of America. Today I bring a somewhat different viewpoint to the problem of utility responsibility for protection of the enenvironment, that of a chief executve of an electric utility which serves a large city. Happily, I don't have to eat last year's declaration of optimism. Working within the electric industry as I have for the past nine months, I find its leaders are keenly aware of their responsibility to build and operate facilities that, insofar as practicable, will protect and even improve the natural environment. I find, also, a growing awareness of responsibility to protect and improve not just the natural environment but the social and economic environment of the communities served by the utilities. This latter concern, in the end, may prove to be the more significant to our industry's — and our nation's — future.

The classic statement of public utility responsibility is that a public utility has the duty to provide adequate service to all applicants at reasonable prices and without discrimination. For public utilities which supply electric energy this is an enormous responsibility. Not only must the utility supply today's needs of its customers for electric energy, it must forecast what those needs will be decades into the future, and make investment commitments of large sums of capital based upon the forecasts. If construction costs or interest rates are high, the utility cannot wait for more favorable conditions before it makes these investment commitments. Nor, perforce, can any utility decide, as some industrial corporations have decided, to move its operation to another part of the country where investment opportunity seems better. A public

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utility is joined in perpetual wedlock, for better and for worse, to the community it serves.

As large as this traditional responsibility may be, today a new and even larger concept of utility responsibility is emerging. It is not a substitute for, but a logical extension of the traditional responsibility. It says that, as public utilities, we must not only provide good service to all upon just terms, but we must do so *with due regard for protecting — even improving — the environment.* And it extends not only to concern for the natural enviroment — clean air, pure water, the natural landscape, quietude — but also for the social and economic environment of the communities we serve. It has become very important to utilities whether Negroes and Puerto Ricans have decent jobs and housing and education and recreation. It has become important not just because it is morally right but because as public utilities we have an interest in the social and economic well-being of all the people we serve. They are our customers. If the social and economic vitality of our cities wanes, our investors, employees, and consumers are directly and adversely affected.

The new concept of public utility responsibility is not easily applied. For example, should a utility spend $140 million to put 25 miles of transmission lines underground when they can be placed overhead for $12 million? If so, who should pay the added costs: the people who live in the areas where the lines are to be buried and thus benefit directly? All the customers, through rates? Taxpayers? Which taxpayers: local, state or federal? Suppose a utility operates in a market with an adequate supply of skilled labor. Should it nevertheless expend money to train members of underprivileged groups to raise their levels of opportunity? Should ratepayers or taxpayers bear the cost of the training program? Should a utility spend $2 million extra to make a generating station better looking, and perhaps build a playground next door to it? How deeply should it get into public recreation? Is not its primary duty to provide plentiful low-cost energy?

There is a natural temptation, I think, to go overboard for protection of the environment. To be for natural beauty or social justice is like being for motherhood and the flag. But we must remember, as electric public utilities, that the basic job entrusted to us by society is the provision of plentiful, reliable, economic electric energy. We cannot perform that job without some impact on the environment. It is not our option to decline to serve new electric loads, which is the only way that we could altogether preserve what remains of the nation's natural environment. If we build a nuclear plant we will discharge unnatural heat into the waters or into the air. If we build a pumped storage project, we will create an unnatural reservoir in the hills. If we install jet engines in the cities to meet peak electric loads we will creat unnatural noise and air pollution.

But as electric utilities we are not alone in changing nature. Does a well designed electric transmission line damage the natural landscape any more than a bridge or a superhighway? Can society afford to place all transmission lines underground any more than to replace all bridges and superhighways with tunnels? Are the architectural achievements of man always and necessarily inferior to the natural landscape? These broad questions, I think, can be answered quite easily. But in particular cases, there are very hard questions which can be resolved only by exercising that elusive quality we call good judgment.

Engineers, who comprise most of the technical competence of a modern electric utility, are not specially trained to make this type of decision. Engineering discipline measures function, economy, strength, and safety — but not aesthetics or social utility. What disciplines, then, do train a utility executive to apply the new concept of public utility responsibility?

Surely, engineering is the starting point, and the teachings of economics and accounting also are important. But architects and doctors and chemists and ecologists must be consulted, too; and when utilities address themselves to social and community problems, they must consult educators, political scientists, sociologists and psychologists. There is another discipline I must not neglect to mention: the law. Perhaps the lawyer, who is trained to assemble and organize relevant facts, to apply logic, and to deal with contentious situations, is as well equipped as any professional man to grapple with the management decisions that face a modern utility executive.

I do not mean to suggest that courts, which are staffed by lawyers, will have an easy time enforcing the new concept of utility responsibility. In general, I doubt that its enforcement will lie in the courts, nor even primarily in administrative bodies. It involves daily questions of judgment and of taste that the principles of *stare decisis* and the procedural delays of due process are ill-equipped to deal with. But there is a tribunal in which the new concept will be enforced. It is, indeed, the ultimate judge of the worth of all economic and social institutions. I refer, of course, to public opinion. If our industry is to keep the public respect and esteem it has earned — upon which our privilege to serve the public ultimately rests — we have no choice but to apply a broad concept of public utility responsibility.

How to finance the new concept of utility responsibility is another hard question. Utilities are not eleemosynary institutions. All costs of service must be reflected in our rates, or charged to the Company's stockholders as corporate gifts. Investors are entitled to earn a fair return on the investment of their savings. If a particular utility does not offer investors a reasonable return, they will place their savings with another company which does. This is a consideration that every

utility manager, confronted by the tremendous need for new capital to finance expansion, is constantly aware of.

Thus far I have spoken only in general terms of the new concept of utility responsibility. Specifically, what does it mean? Let me illustrate, for a few minutes, by examples of how we are seeking to apply it in New York City and Westchester County. I hasten to say that we make no claims at the Edison Company to greater accomplishment in this area than many other electric utlities which serve large cities.

Looking first at concern for protecting the natural environment, the biggest concern in New York City is clean air. Consolidated Edison is by no means the worst air polluter. Motor vehicles, which emit more than 50 percent of the total load of air pollutants, must be awarded that dubious distinction. Incinerators of apartment houses, office buildings, industries, and the city itself put more than twice as much particulate matter into New York's air as the Edison Company. The furnaces of New York buildings which burn high sulfur residual oil put as much sulfur dioxide in the air as all of our plants. In 1967 our plants contributed less than half of the sulfur dioxide in New York City's air and about 15 percent of the particulates. Over-all, we were responsible for not more than 12 percent of the *total* air pollution in the city. But our customers, who daily see our tall, gaily painted smokestacks, quite naturally give us credit for causing a much bigger share of the problem.

Our ultimate goal is to eliminate every Con Edison smokestack in town, and to reduce to zero our contribution of air pollution. Our long-range solution to the problem is nuclear energy and, hopefully, pumped storage. By 1980 we expect to generate 75 percent of our electricity in nuclear plants, compared to only 4 percent today.

We also have shorter-range solutions to our part of New York City's air pollution problem. Soon we will have spent $150 million on air pollution control devices, including precipitators that remove 99 percent of the ash from the stacks of our coal burning plants. Since last November all the fuel oil we burn has contained only 1 percent sulfur, and starting next month all the coal we burn will have 1 percent or less sulfur. In 1968 we will reduce our stack emissions of sulfur dioxide and particulate matter by roughly one-third. We also are seeking a change in oil import regulatons comparable to that in effect on the West Coast, which would enable us to buy, economically, oil with as little as 5/10ths, or even 3/10ths, of one percent sulfur content. We have offered to assist the City to build efficient, central incinerators which would burn refuse without air pollution, and produce by-product steam we would purchase to supply steam customers.

As we attempt to solve the air pollution problem through nuclear power plants, we must face up to another kind of pollution — thermal discharges — which may prove even harder and more expensive to con-

trol than air pollution. The most efficient nuclear plants discharge about two-thirds of their total energy as low grade heat. Even the most efficient coal-burning electric plants discharge about 50 percent of their energy in this manner. This waste heat must be dissipated either into the atmosphere by cooling towers, or into a natural body of cool water. Cooling towers are typically tall and ugly, and frequently emit a plume of steam. They are also expensive. If the waste heat is dissipated into a natural body of water, it may adversely affect the aquatic fish and plant life. The best solution would be to find a use for the waste heat, but since it is low grade this is not easy. The next best solution, we think, is to build the nuclear plants on large bodies of water capable of absorbing the heat discharge without damage to the ecology. In our case, tidewater locations are the best possibilities. All of the British commercial nuclear plants, I understand, have been located on tidewater.

By no means does the foregoing constitute a complete catalogue of the Edison Company's concerns for the natural environment. To improve the city's appearance, we are removing all of our old gas storage tanks, renovating the exteriors of generating stations, placing all distribution lines in new subdivisions underground. To make the city less noisy, we are procuring new and quieter equipment to break the city pavement, and installing transformers which produce a minimum hum. In suburban Westchester County, we have announced that we will not seek new rights of way for transmissions lines. After we have used existing rights of way to the maximum extent, additional high voltage lines will be placed underground.

Our concern for the social and economic environment of our service area thus far has been expressed mainly in employment policies. Thirty percent of our new employees last year were Negroes and Puerto Ricans. Some 12 percent of our total work force now come from these minority groups. About 10.5 percent of our skilled craftsmen come from these groups, as do 8.5 percent of our white collar employees. In cooperation with Local 1-2, Utility Workers of America, we have a new job training program for high school dropouts, and a new part-time employment program for high school juniors and seniors in danger of dropping out because of economic pressures. Both programs can lead to permanent employment with us.

In addition to these employment and training programs designed to get at the root cause of urban and racial problems, we participate in short-range programs designed to ease the more immediate pressures. We have developed a vacant lot near a generating plant into two baseball diamonds and a football field. This year, perhaps through the Urban Coalition, we will make a financial contribution to support summer programs devised by the City of New York. These include youth councils,

play streets, sprinkler caps, street movies, bookmobiles, bus trips to outlying recreation areas, and the like.

There is much more that we can do, and hope to do, to help solve our city's problems. I hope we can cooperate more closely with the public schools to make their vocational educational programs more effective. I hope, too, that we can take an active role in housing programs, especially the remodeling and upgrading of older housing within the city. I cannot forbear mentioning, either, another way in which we contribute to the city's social and economic betterment: we pay 8 percent of all the real estate taxes collected by New York City.

The title for these remarks limited me to *utility* responsibility for protecting the environment. In closing, however, I should point out that throughout the business community, of which electric utilities are only a part, there is being articulated a new sense of environmental responsibility. Business must, of course, not lose sight of the need for profits. They are the savings which, when reinvested, enable our economy to expand. The most efficient economies in the world, and those which distribute their benefits among the people most widely and equitably, are organized on the profit principle. But within the framework of this profit system there is unquestionably a quickening of concern for the impact of business decisions on the environment that can only augur well for the future of our land, and our form of society.