

# PowerPlants & Cottontails

BY BRUCE WALLACE

AN ENVIRONMENTAL IMPACT REPORT was recently left on my desk. Idly I thumbed through its 200 or so mimeographed pages—maps, charts, tables, diagrams, and much officialese. The report had been prepared in fulfillment of federal regulations governing the construction of nuclear power stations. As I flipped the pages, I saw diagrams of water discharge nozzles; my eye picked out such words as “cottontail rabbit,” “alewife,” and “chipmunk.” Curious assertions surfaced from the text: The danger of contamination of milk by Iodine-131 is not sufficient to worry about, but in any case there are no dairy herds near the site of the proposed plant.

Flipping pages is, with me, a reverse process, because I start from the end. At last I approached the front matter—Foreword, Table of Contents, and Summarized Cost-Benefit Analysis. I paused to read the summary because of my unfamiliarity with these studies. As I now recall, the summary analysis consisted of three “benefits” and four “costs.” Benefits: 1) the production of 3,000 megawatts of electrical power; 2) the injection of \$800,000 into annual regional payrolls; 3) an annual contribution of \$4 million to local property taxes. Costs: 1) 45 acres of currently unused land for plant construction; 2) usurpation of 100 acres for additional transmission lines; 3) the dumping of some 700 pounds of salts per day into Lake Ontario; 4) the exposure of local populations to a level of radiation equal to 7 per cent of that which they now receive from natural sources.

That was it. I reread the summary once more, searching in vain for something profound, for a shred of evidence that the report’s authors were emotionally moved by, or that they stood in awe of, the task that had been assigned to them. None was to be found.

Now, 3,000 megawatts of electrical power is about one-fifth of the generating capacity of the entire United States in 1930, or one-tenth the capacity in 1940. In the face of such magnitude what does the cost-benefit analysis consist of? Local salaries and property taxes on the one hand, 700 pounds of salt per day on the other. Inside the report, not summarized, are the cottontail rabbits, the chipmunks, and the alewives. Oh, yes, and an explicit surmise

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Shouldn't an environmental impact statement look beyond the local rabbits and chipmunk?

that persons will continue in the future to demand television sets, electrical appliances, and air conditioners.

In my estimation, a report of the sort left on my desk is incredibly inadequate. In a sense, I expect reverence from a group of human beings who are assessing a power plant that is the equivalent of one-tenth of 1940 America. I expect them to look, or appear to be looking, one-tenth of the way to Los Angeles in a search for possible impacts. On the other hand, I am humble in knowing that those who compiled the report are fallible human beings making a living by doing the best possible within the confines permitted by their superiors. Would I have done better in their position? Not likely. The urban sociologist Jane

Jacobs has described her frustration in working with zoning officials; because she cannot accept their basic premises, she is incapable of offering them sane advice. And I make this confession now: I would be a useless member of an environmental impact study group.

Can anyone seriously believe that the generation of 3,000 megawatts of electricity will have an environmental impact that is limited to less than 200 acres of land? Suppose that I am asked to prepare an impact statement concerning the use of my automobile. I shall anticipate the effects of starting it, pressing down the gas pedal, and throwing it into gear so that it rushes recklessly from my driveway at top speed. In preparing my report, am I to count and describe the gravel stones



in my drive, to identify the stunted weeds that grow here and there among them, to study the numbers and habits of the ants and beetles that scurry back and forth in search of Lord knows what? Am I to prepare a report that claims on the cost side that three pounds of gravel will be disturbed as the rear wheels spin? That several hundred small pebbles may be irretrievably lost when thrown into the neighbor's lawn? That there will be some destruction of the wildlife inhabiting my driveway but that the number of casualties involved should be small? That the populations are expected to recover quickly? Do I speak of the children at play in the park across the street? Of the residential area beyond the park? Of the shat-

tered lives of those persons my car may strike if it runs amok?

It seems to me that the creation of 3,000 megawatts of electrical power has consequences that follow just as surely as those that can be expected in the wake of a careening car. I think these consequences belong in an impact report—not in the form of glib generalities about TV sets and electrical ovens but, rather, in specifics dealing with acreages for new factories and storage yards; the demands of these factories for raw materials; the tons of wastes that will be produced; the trucks needed to haul materials to the factories, finished products to the homes, and industrial waste and household garbage to the dumps; the highways on which the trucks will

move; and all the other items that follow as surely as the seasons. To speak only of chipmunks and cottontails at the plant site and the alewives offshore is a travesty.

Throughout the report the "first straw" view prevailed. If a report is to enlighten its reader, it should be prepared with the opposite view, the "last straw" view. Take, for example, the 700 pounds of salt that are to be dumped each day into Lake Ontario. The lake holds some 400 cubic miles of water that already contain low concentrations of salt; consequently, the report argues, the planned addition of 700 pounds daily is trivial. Suppose, on the contrary, that the salt concentration in Lake Ontario was exceedingly high already. Would this supposition alter the argument concerning the dumping of salt in the lake? Not at all! If there are already millions of pounds of salt per cubic mile in the lake, then the addition of a mere 700 pounds per day is also trivial. I submit that if a report can reach the same conclusion from two totally different sets of data, it is either useless or misleading.

To be of use in arriving at rational decisions, an environmental impact study, even though it is prepared for a single power plant, cannot pretend that its subject exists in a vacuum. On the contrary, it must describe the entire nationwide community of power plants, of which its subject is but one. It is not enough to be told that the one plant will discharge 200,000 curies of radioactive gas yearly into the atmosphere. To evaluate the meaning of such an admission requires that we know how many other plants are doing the same and where these other plants are located. If present power policies are to continue, how many such plants are anticipated in the future? Nothing of value is gained if the impact report for the 2,000th nuclear power plant emphasizes that the expected emissions of salt, heat, and radioactive wastes will amount to only five ten-thousandths of what is already in the atmosphere and oceans.

The individual environmental impact study (though it may be of some local value) cannot possibly forestall disastrous environmental changes. Indeed, if one were asked to design a procedure that was guaranteed to produce disasters, the individual impact report would be an obvious suggestion. By being constrained to an analysis of individual stations, one by one, none of the study groups will notice when the heat, salt, radioactive wastes, and the cascading ramifications of energy production have merged throughout the length and breadth of the land. And for those who prepare impact studies as well as for those who merely flip through them, there will then be no place to hide. □

**T**HE CONSTRUCTION OF Antoine Priore's new laboratory in Bordeaux, France, is a few months behind schedule, which is understandable, since its centerpiece is an immensely complex and unique apparatus and Priore is the sole designer and supervisor of the project.

It will soon be completed, and then, after testing and calibration of the

The future may hold a Nobel Prize or a booby prize.

As things go in the normally well-disciplined and orderly processes of science, with its tradition of bits of knowledge accreting through the openly published efforts of degree-bearing investigators in properly certified institutions, the Priore goings-on are indeed a bizarre business. The French scientific community was riddled with accusations over "L'Affaire Priore." To those who say it smacks of charlatanism, antirationism, and illicit political interference in the dispo-

Academy of Sciences, whose distinguished research in biology has brought him the rare honor of foreign membership in Britain's prestigious Royal Society. Still another investigator of the machine, director of one of the world's leading medical research centers, flatly dismisses it as a hoax and produces documentation to back his contention that several years ago healthy animals were covertly substituted for ailing ones to make it appear that the machine had "cured" them. The World Health Organization, however, with lines out to expert

# THE FRENCH CONCOCTION

International reputations will be decided by whether or not a giant ray gun in Bordeaux really cures cancer in rats and African sleeping sickness in mice.

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apparatus, several groups of animals in a holding room on the third floor will be injected with a usually lethal form of sleeping sickness. Some will be left in the room, almost certainly to die. Others will be taken to the ground floor of the laboratory, where they will be exposed to rays emanating from an instrument-packed, five-ton, bell-shaped dome suspended from the ceiling of a high chamber that resembles the science fiction set created by a runaway imagination and an ample budget.

Not long afterwards, when the animals' fates have been determined by a blue-ribbon panel of scientists, the men who run research in France will either be ridiculed as naïve dupes by their colleagues around the world or glowingly hailed for having had the courage to proceed with "L'Affaire Priore." The outcome might be no more than grist for a musical farce, with white-coated elders of science cast as a chorus of clowns, or it might open the way to a valuable avenue of medical therapy, leading toward far-off but exciting possibilities for treatment of a large array of human afflictions.

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sition of government research funds, Priore's proponents charge elitist blindness. It wouldn't be the first time that a man who demonstrably knows almost nothing about science has intuitively stumbled onto a revolutionary scientific development. Nonetheless, what has provided the matter with an air of sticky confusion is Priore's secretive manner. He has been extraordinarily cagey about the innards and output of his electrical contrivances, of which the new one is the fourth and largest he has built over the past 20 years. The professional capabilities of the scientific partisans pro and con Priore provide no clue to the truth, for on both sides can be found sensible people with international scientific reputations.

For example, there is Andre Lwoff, a microbiologist who shared the Nobel Prize for medicine or physiology in 1965 and who, after studying one of Priore's earlier machines at the request of the French government, vigorously recommended that government funds be provided and that the concept be pursued for its great scientific and medical potential. However, two physicists also studied it and dismissed it as a concoction of amateurish nonsense.

One key and unwavering backer of Priore is the highly influential Robert Courrier, secretary of the French

