sented, and for 3 years Richter plugged quietly away in his laboratory on Huemul Island in Lake Nahel Huapi near Bariloche.* Suddenly, in March 1951, Peron summoned the press for a momentous but cryptic announcement: Richter had succeeded in his experiments, and Argentina would soon be generating electricity from an atomic source. Peron declined to name the source, but he hinted broadly that it was fusion—an assertion all the more remarkable for the fact that it preceded by more than a year the first U.S. thermonuclear blast.

Peron's grandiose claim succeeded mainly in making Argentina's fledgling nuclear program the butt of local jokes. (One local publication dubbed Richter's Huemul Island laboratory "huele a mula"—literally, "to pull a fast one.") Internal pressure in the CNEA led to Richter's sacking in late 1952, and Peron himself departed under unhappy circumstances 3 years later.

Argentina's nuclear program has long since shed its status of laughing stock. To some observers, its gradual accretion of a nuclear capability now poses much the same dilemma as India's first nuclear test on 18 May.

Developing nations urgently need new sources of energy, and preferably ones that allow a measure of self-sufficiency. Nuclear power plants—especially those using domestic natural uranium—are an obvious answer. But can the spread of reactor technology be policed well enough to control the ultimate uses of the resulting plutonium?

International safeguards may be effective insofar as they apply, but they do not automatically apply to reactors designed and built indigenously by nations that do not subscribe to the NPT. The case of India suggests that reactor technology has trickled around the ends of a Maginot line of safeguards. Argentina may, in time, provide a second case.—ROBERT GILLETTE

* Jorge A. Sabato, "Energia atomica en Argentina," *Estudios Internacionales*, **2**, No. 3 (1968). A respected Argentine technologist, Sabato for many years headed the CNEA's metallurgical branch. See also, John R. Redick, *Military Potential of Latin American Nuclear Energy Programs* (Sage Publications, Inc., Beverly Hills, Calif., 1972).

Con Edison: Endless Storm King Dispute Adds to Its Troubles

In 1962, the Consolidated Edison Company of New York announced plans for a 2000-megawatt hydroelectric facility about 40 miles north of New York City in the Hudson River highlands. This proposed pumped-storage facility was called the "Cornwall project" after the name of the village it would adjoin at the foot of Storm King Mountain. The project soon gave rise to one of the earliest and most noted cases in environmental law. The case was brought by conservationists who organized as the Scenic Hudson Preservation Conference to stop the project. *Scenic Hudson*, as the case is known, is still unsettled today even though nearly 10 years have passed since it was first heard in the courts.

As the name of the case suggests, the primary issue raised at the inception of *Scenic Hudson* in 1964 and 1965 was one of aesthetics. Early plans for the Cornwall facility called for the powerhouse to be built above ground, requiring a deep cut in the face of Storm King. This mountain is a prominent feature of the Hudson highlands, which are of unusual aesthetic appeal because nowhere else in the eastern United States does a major river cut through the Appalachian Mountains at sea level and give the effect of a fjord.

The Cornwall project (see Fig. 1) has long since been redesigned to make it less intrusive, however, and today the case turns not on aesthetics but on two other issues. One is whether the project would cause major fishery losses. The other is whether Con Edison is justified, in terms of economic efficiency and wise use of fuel, in investing in the proposed facility.

Its cost (including that of related transmission lines) has been variously estimated at between $537 million and $741 million. According to a staff study of New York City's Environmental Protection Administration, Con Ed could generate the same amount of peaking power at lower cost and substantial fuel savings by installing newly developed systems that combine gas- or oil-fired turbines with waste heat boilers that can be used to produce either steam or (with low-pressure steam turbines) more electricity.

The issues in *Scenic Hudson* and the evolution of that endlessly complicated case are best understood in the light of Con Edison's overall situation.

Con Ed's problems are such that the company recently escaped bankruptcy only by persuading the legislature to have the state buy two of its still unfinished generating units for about $500 million. In addition, the company reluctantly "passed" the spring quarter dividend, an action without precedent in its 89-year history. This caused Con Ed's stock to drop sharply and hurt stock prices and bond ratings throughout the utility industry.

Irving Kristol, professor of urban values at New York University, wrote in a recent article in the *Wall Street Journal* that Con Ed has been "mugged and robbed" by elected city officials who first "prepared themselves for self exculpation by giving their victims a bad name." Inasmuch as Con Ed is forced to bear an immense tax burden —the company pays 8 percent of all the property taxes collected by the city—that lurid characterization seems to contain more than a little truth.

Kristol also named environmentalists —whom he described as "upper middle class malcontents"—in his bill of indictment. They were accused of frustrating Con Ed's efforts to build needed generating capacity and of increasing power costs by insisting on the use of low-sulfur fuel, regardless of price. Con Ed has itself assigned the blame for many of its problems to environmentalists, accusing them of "harassment" for their continued actions opposing construction of the Cornwall facility and certain other projects.

Yet, even if politicians and environ-

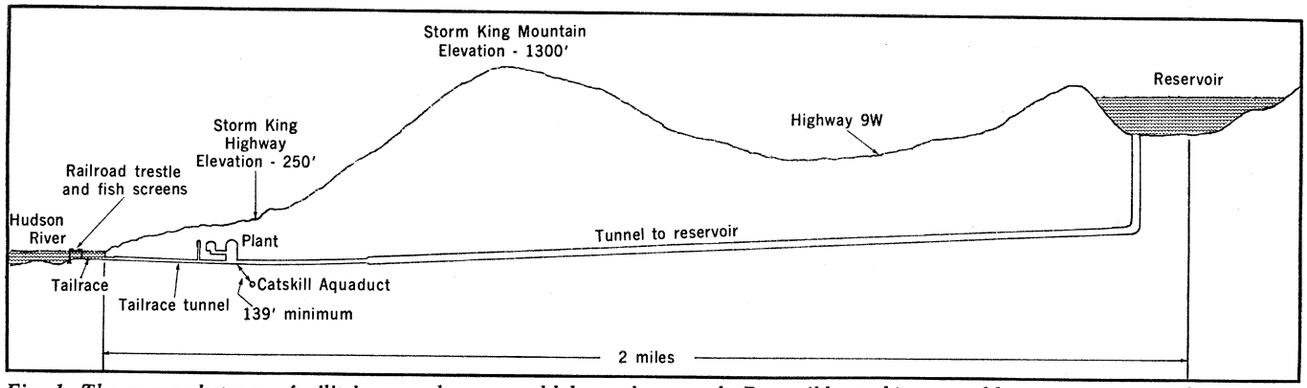

Fig. 1. The pumped-storage facility's powerhouse would be underground. Reversible turbines would pump water to the reservoir during hours of low demand. Hydropower would be generated at hours of peak demand.

mentalists were guided by sweet reason alone, Con Ed's problems would be great simply because of the difficulty of supplying electricity to 9 million people concentrated in a relatively small service area made up solely of New York City and Westchester County. Consider the following:

- Con Ed has to cope with extraordinarily high peak demands for power, yet its overall "load factor" (the ratio of average output to installed capacity) is only about 50 percent. After building to a high afternoon peak, demand falls off sharply as commuters go home to Connecticut, Long Island, and New Jersey. Many of Con Ed's generators are then shut down or operated at reduced load.

The Cornwall project would alleviate this imbalance by serving, in effect, as a gigantic "storage battery." Generating plants that would otherwise be idle at night would provide the energy to pump water from the Hudson to a reservoir about 1000 feet above the river—water later to be released to generate much of the electricity needed to meet peak demands.

- In New York City, power lines must be buried beneath crowded streets, which improves reliability of service but makes for installation and maintenance costs 20 times higher than what would be incurred for overhead wiring. Also, labor and construction costs are generally higher in New York than elsewhere.

- Concentrating 42 oil-fired baseload generating units plus more than 100 gas turbine "peaking" units in the immediate New York City area makes for exceptional and inescapable environmental problems—problems that would be too dangerous to ignore even without "upper middle class malcontents" to sound the alarm. If high-sulfur oil or coal were generally used in Con Edison's base-load plants, primary air quality standards—that is, those standards related to the protection of human health—could be grossly violated, at least under certain atmospheric conditions. Forty-three cents of every dollar spent by Con Ed now goes for fuel, which tripled in cost during the 6 months after the onset of the energy crisis.

The twin problems of air pollution and high expenditures for low-sulfur fuel oil imported from the Middle East could be reduced through greater reliance on nuclear units. But attempts to build such facilities have tended to create as many problems as they would solve. A plan to build a nuclear plant on David's Island in Long Island Sound, within a few miles of the Bronx, was abandoned because of objections that the facility would be too near New York City. But then, Con Ed also abandoned plans for a nuclear plant at Verplanck, on the Hudson River in upper Westchester County more than 20 miles north of the city. In the latter case, public concern focused especially on the possibility that the plant would harm the Hudson River fishery.

Con Ed's only nuclear units are at Indian Point (also on the Hudson in upper Westchester), and they too have been the target of continuing criticism as a threat to the river fishery. Unless Con Ed can produce convincing research showing that the threat has been exaggerated, cooling towers will be required at Indian Point at substantial cost to the company and its customers.

- Although overall demand for electricity has declined somewhat as the result of the energy crisis, Con Ed nevertheless needs large amounts of investment capital to modernize its generating facilities. And, if demand eventually resumes its upward climb, generating capacity will have to grow apace. Yet Con Ed's ability to generate capital internally or to borrow money at reasonable cost is constrained by the difficulty of obtaining rate increases sufficient for its needs. Already, the company's rates are anywhere from a third higher than those charged by utilities in other large cities to more than twice as high.

The *Scenic Hudson* case anticipated the wave of environmental litigation that developed in the late 1960's and early 1970's. As in the later litigation, what was involved was a government agency suddenly disturbed in its complacent relationship with a client industry by citizens using available substantive and administrative law to demand consideration of environmental values.

Little swayed by the objections of conservationists, the Federal Power Commission (FPC) in 1965 licensed the Cornwall project in the aesthetically objectionable form that Con Ed had first proposed. The Scenic Hudson Preservation Conference (SHPC) challenged the FPC action in the U.S. Court of Appeals for the Second Circuit and thus began a legal marathon—the total legal expenses by now approach a million dollars, $350,000 for SHPC and $575,000 for Con Ed. At the outset, SHPC depended largely on a few wealthy donors for financial support, but eventually undertook a sophisticated public relations and fund-raising effort that ultimately produced a list of more than 20,000 contributors.

The decision by the Second Circuit court in late 1965 directing the FPC to reopen the licensing proceeding represented a major breakthrough for environmentalists. Most relevant here is the fact that the court placed upon the FPC an affirmative duty to weigh aesthetic and other environmental values and to explore alternative means

of meeting the project's objectives.

In 1966 Con Ed amended its plans and put the powerhouse entirely underground, thus eliminating the cut in the face of Storm King. The tailrace leading from the powerhouse to the river would be visible but would be little more prominent than some preexisting man-made features, such as the railroad trestle that skirts the base of the mountain. Nevertheless, SHPC continued to oppose the project, before the FPC and then again before the Second Circuit court. Several other parties such as the Sierra Club, the Audubon Society, and even the City of New York joined SHPC as plaintiffs. The issues were now broadened to include possible hazards to fishery resources and to New York City's Catskill Aqueduct (which passes under Storm King within 140 feet of the proposed powerhouse).

In fact, every issue that figures in *Scenic Hudson* today had been raised by 1971 when the Second Circuit court rendered a second opinion in the case, this one affirming the FPC's licensing of the project. Written by the same judge who prepared the 1965 opinion that had found the FPC at fault, the new opinion, though passing no judgment on the Cornwall project as such, held that the FPC had thoroughly evaluated the project and all alternatives.

One of the three judges on the Second Circuit panel would have reversed the FPC action, however, and it was only by a four to four tie vote that the Second Circuit court as a whole later decided not to reconsider the case. And, despite Con Ed's narrow victory in the federal court, the Cornwall project was still unable to proceed. SHPC was now suing in the state courts to block certification of the project under the water quality laws. By the time (March 1973) that SHPC had lost this case and exhausted all appeals, *Scenic Hudson* was about to undergo a revival in the Second Circuit court.

The principal substantive question on which this case turns today is the possibility that the pumped storage project would gravely harm the Hudson River fishery, a surprisingly vital resource despite all the abuse of the river in the past by polluters. (The fishery has benefited in recent years from pollution abatement efforts.) The most valuable fish inhabiting the Hudson are the shad and the striped bass, the latter being especially important because of its appeal to sports fishermen.

Both the shad and the striped bass are anadromous—that is, they return from ocean waters to tidal rivers to spawn. Fishery biologists have for years generally believed that Chesapeake Bay is the spawning and nursery area for nearly all the striped bass found along the Atlantic Coast, from North Carolina to Maine. Now, there are some who believe that from maybe 20 to 80 percent of the bass found from New Jersey northward come from the Hudson, the only estuary north of Chesapeake Bay where the stripers spawn.

In licensing the Cornwall project in 1971, the FPC noted that a study conducted from 1965 to 1968 under the auspices of the New York State Conservation Department and the U.S. Fish and Wildlife Service had concluded that the project would do the Hudson fishery no significant harm.

In early 1973 the conclusions of the fisheries study were challenged, however. The Hudson River Fishermen's Association (HRFA), a group comprised mainly of sports fishermen, petitioned the FPC to reopen the licensing proceedings and said that the loss of striped bass larva had been grossly underestimated because of a simplifying assumption used in the earlier study. This was the assumption that the river flows past Storm King Mountain in only one direction, whereas in fact the flow changes four times daily with the shifting of the tides.

When operating at full capacity, the Cornwall plant would be withdrawing water from the river at the almost unbelievable rate of 8 million gallons per minute. HRFA and its coplaintiff in the suit, the SHPC, argued that if, as a result of tidal action, a given segment of the river's flow passed by the Corn-

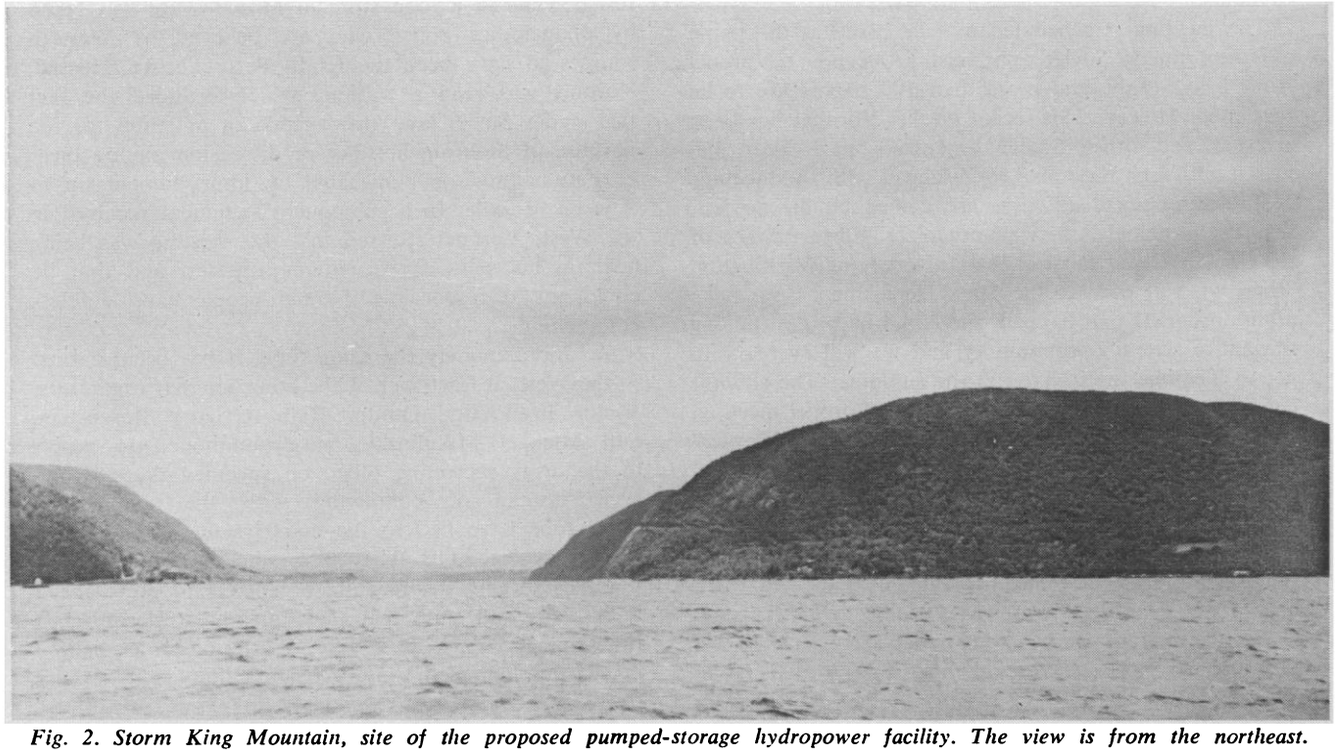

Fig. 2. Storm King Mountain, site of the proposed pumped-storage hydropower facility. The view is from the northeast.

wall water intake several times, the percentage of larva that would be drawn into the plant and destroyed by abrasion and turbulence would be vastly greater than if that segment of flow had been subject to only a single withdrawal. Moreover, the Cornwall plant's destructive potential was held to be the greater by virtue of its location toward the lower end of the 80-mile reach of the river in which the bass spawn.

The credibility and influence of the foregoing argument was strengthened last December after the Environmental Sciences Division of the AEC's Oak Ridge National Laboratory (ORNL) issued a preliminary report estimating that the cumulative effect of the Cornwall plant's withdrawals would be such that 25 to 75 percent of the annual striped bass hatch might be destroyed. The division arrived at this result through a reanalysis of the data in the earlier fisheries study, which had put the annual loss at only a few percent of the total hatch.

Although the Cornwall hydroelectric facility was beyond the AEC's regulatory scope, the ORNL's involvement (at the request of Senator Abraham Ribicoff of Connecticut) was appropriate because of its previous analysis of fishery problems at Indian Point. Its report was issued with a covering letter by Dixy Lee Ray, AEC chairman, who urged that it be received cautiously. A more complete and up-to-date report would, she said, require more data as to the percentage of striped bass that spawn upstream from Storm King, the residence time of eggs and larva near the plant intake, the degree of tidal movement, and the direction and volume of net water flow past the plant.

Subsequently, in deferring the deadline for installation of a cooling tower at Indian Point, the AEC appeal board rejected as wholly unproved a conclusion by ORNL scientists that the Hudson contributed most of the striped bass to the mid-Atlantic fishery. It also rejected the mathematical model used at the ORNL to estimate the impact of entrainment (the drawing of larval and other organisms through the Indian Point plant) on the Hudson fishery. Con Ed has since seized upon these ap-

Scientists Plan Protest during Nixon Summit in Moscow

American organizers of an officially unauthorized scientific meeting planned for early July in Moscow say they will use the coincidental timing of the summit meeting between President Nixon and Soviet party leader Leonid Brezhnev as the occasion for a major protest if the Soviet authorities deny visas to foreign scientists planning to attend the meeting.

Scientists from the United States, the United Kingdom, several countries of Europe, and Israel have applied for visas to attend the meeting, which will be hosted by Russian scientists, most of whom are Jews whose professional scientific activities have been curtailed since they made known their desires to emigrate to Israel.

The meeting is scheduled to take place at the home of the noted Soviet physicist Alexander Voronel from 1 to 5 July, and more than 100 papers are to be presented. However, in recent weeks, Voronel has been arrested and other Soviet organizers have been harassed, although they plan to go ahead with the meeting.

If visiting scientists' visas are denied by the Soviets, says the principal American organizer, Edward Stern of the Physics Department at the University of Washington, "then we will contact the State Department and make a big uproar. If that happens there will be protest among the entire scientific community and we will even try to get to Kissinger and Nixon at the summit." The summit begins on 27 June or 4 days before the Voronel meeting.

"We feel this is a very important part of détente," Stern says. "If the Soviets want scientific and technical cooperation they have to be consistent and not choose what's to their advantage and censor the rest. We would like to make the point that when Kissinger and Nixon sign scientific and technical agreements they will work only if the scientists themselves are able to participate."

Stern is one of three international secretaries of the meeting, which is on "Applications of Physics to Other Fields of Science." The meeting is sponsored by an international board of sponsors which includes eight Nobel prizewinners in cooperation with Tel Aviv University. The meeting, Stern says, is purely scientific in nature and is aimed at closer contact between scientists of these countries. However, its organizers have not sought help from the U.S. government and it is not being held under any of the official exchanges that resulted from the scientific accords signed by Nixon during a previous Moscow summit in 1972.

The Soviet government has given no indication as to what it will do about the visa applications. But it has acted against the Soviet organizers of the seminar. On 8 June, the principal organizer, Voronel, was arrested while in a food store in Moscow. He was taken by plainclothes police who are believed by Western sources to have been the KGB. Before being released, Voronel was read a warning which included the fact that under Soviet law "propaganda or agitation for the purpose of arousing hostility or dissension among races or nationalities" is punishable by imprisonment up to 3 years or exile. In a subsequent statement received in the West, Voronel stressed that the meeting was being held, in his view, for scientific purposes, and that he could not be responsible if other people have a different opinion.

At approximately the same time, it has been learned in the West, at least four of the other seminar organizers, Victor Brailovsky, Dmitry Ram, Grigory Rosenstein, and Michael Mikulinsky, were summoned to report to the army recruiting office on specified dates. However, instead of complying with the summonses, these four have fled to the countryside and are being hunted by the KGB. They have since sent messages to the West urging the meeting organizers to press ahead with plans and state that they intend to appear when the seminar begins on 1 July. Western sources believe that if they come to Voronel's house that day, they are likely to be arrested.—DEBORAH SHAPLEY

peal board findings to suggest that allegations of a threat by the Cornwall project to fishery resources are clearly without scientific proof.

Yet, whatever the weaknesses of the ORNL report, the fishermen's association and the SHPC have persuaded the Second Circuit court to call for new hearings by the FPC on the fisheries issue. In its order of 8 May, the court indicated, moreover, that the entire case may have to be reconsidered if the fishery is found to be endangered and if plant operations cannot be curtailed for the spawning season, which overlaps with the summer period of peak power demand.

Con Ed began preliminary construction work at Storm King in March; but, despite this brave show of optimism, the Cornwall project is now essentially stymied, and there are reasons to suspect that it may never be built. First, the burden is on Con Ed to show that the project will not do unacceptable damage to fishery resources. G. S. Peter Bergen, an attorney for Con Ed, says that before the end of 1975 some answers should be available from the fishery research program being conducted for the company by Texas Instruments, Inc.

It should come as no surprise, however, if the research findings turn out to be ambiguous and merely bring on a new round of debate among fishery biologists. And, as long as the potential impact of the Cornwall project is in question, those opposing it will hold a major advantage. They can argue that, to the extent the project damages the fishery, the damage is likely to be irreversible. Oil-fired or nuclear generating units along the Hudson can be made closed-cycle facilities through the addition of cooling towers; the Cornwall plant, on the other hand, would not be susceptible to any major modification of benefit to the fishery.

(Con Ed would try to mitigate any losses of striped bass caused by the plant by releasing hatchery-raised fish. But a hatchery is no substitute for a complex river ecosystem.)

Another major reason the Cornwall project looks shaky lies simply in Con Ed's financially precarious

Photocopying: Supreme Court, Senate Move on Issue

The dispute over the right of libraries to photocopy articles from scientific journals progressed to the ultimate stage of due process when the Supreme Court last month agreed to review an earlier Court of Claims decision. Williams & Wilkins, a Baltimore scientific publisher which lost the last round in its suit charging copyright violations by the National Library of Medicine and the library of the National Institutes of Health, sought the review (*Science*, 29 March).

Last November, the Court of Claims found that libraries' filling of individual requests for copies of single journal articles constituted "fair use" under the copyright law. This reversed a previous lower court decision in Williams & Wilkins' favor, and the publisher decided to appeal the Court of Claims finding to the Supreme Court and to seek financial support for legal expenses from others also interested in deriving royalties from library photocopying (see Letters, p. 1330).

Through the more than 4 years of litigation and several preceding years of negotiation the governing assumption has been that the photocopying question would finally be resolved by legislative rather than judicial action via revision of the copyright law by Congress. Photocopying, however, is only one of a number of highly complex issues which have stymied Congress for well more than a decade in its effort to update the 1909 act. Royalties on recordings and films as well as published material are covered by reform legislation and, most recently, disagreements over payments for use of copyrighted material on cable television have slowed the legislators.

Finally, on 11 June, the Senate Judiciary Committee reported out a copyright law revision bill fashioned by its subcommittee on patents, trademarks, and copyrights chaired by Senator John L. McClellan (D–Ark.).

The committee bill's section on library photocopying permits libraries to copy single articles in journals to fill individual requests. Language added to the bill a few months ago would bar "systematic" photocopying for interlibrary loans. This would, for example, prohibit one library from providing photocopies of complete journals to other libraries. The bill also provides for creation of a national commission to deal with remaining photocopying issues, including that of systematic photocopying.

The economic stakes riding on the bill are substantial and the committee was not able to reconcile all major differences satisfactorily. The committee report on the bill is being held up for 2 weeks in order that minority views may be added. Senate action is expected fairly promptly and the odds seem to favor the bill's passage.

Initiative on revision then moves to the House Judiciary Committee. The House passed a copyright revision bill of its own in 1967, but after the Senate stalled out on its revision effort, the House took the view that it would not revive the matter until the Senate sent over a bill.

The prognosis on copyright revision in the House is not clear. The House Judiciary Committee's involvement with the impeachment issue is expected to monopolize attention until Congress adjourns and, with respect to copyright revision, one Hill staff member asks, "If they can't finish, why start?"

Committee attitudes on the principal issues of copyright revision have not emerged. On the House subcommittee which will deal with the copyright revision, the only member who went through the full cycle of copyright hearings in the 1960's is the current chairman, Robert W. Kastenmeier (D–Wis.). The other members of the committee have joined the panel since then.

With the case under review by the Supreme Court and the revision bill moving at last in Congress, resolution of the photocopying issue would appear to be near. But the history of delay and disputation surrounding the issue gives reason to question whether the answers, when they finally come, will be definitive.—JOHN WALSH

position. Indeed, one wonders why a company that must sell two partly finished generating plants to the state to avoid bankruptcy is eagerly committing itself to a new project that might cost up to $750 million dollars. This is especially puzzling when combined cycle turbine units offer an alternative that could be installed in modest and more easily financed increments.

This alternative was first presented in a paper late last year by two staff professionals of the New York City EPA, Charles Komanoff, a senior quantitative analyst, and Ken Semmel, deputy counsel. Although neither is still with the agency, Komanoff and Semmel continue to argue for the combined cycle turbine system. In a just released revision of their earlier paper, they contend that recent improvements in the technology of turbines and heat recovery boilers give their proposed alternative an even greater advantage over the Cornwall pumped storage system than they had first realized.

The comparative "heat rates" (number of Btu's required to generate 1 kilowatt-hour) for the proposed Cornwall plant and the combined cycle units are said to make a strong case for the latter.

For Cornwall, the heat rate is put at 12,420 Btu/kw-hour, based upon an incremental heat rate of 9200 Btu/kw-hour for baseload fossil fuel plants (if nuclear units were used to provide the pumping energy the rate would be higher) and an efficiency ratio of 1 kilowatt of hydropower for every 1.35 kilowatts of pumping energy. For the full combined cycle system, using low-pressure steam turbines to generate more power with waste heat from the gas turbines, the heat rate would be 9100 Btu/kw-hour. For a truncated combined cycle system, with the steam produced from the waste heat to be sold directly to Con Ed's steam customers, the heat rate would be down to 4655 Btu/kw-hour. If these numbers are correct, the Cornwall project would be by no means the most efficient available source of peaking energy.

On top of everything else that may ultimately persuade Con Ed to give up the Cornwall project is the fact that, besides the reopening of the FPC hearings, it must now also submit to an entirely new and separate permitting proceeding. On 10 June, the Second Circuit court affirmed a lower court ruling that, under Section 404 of the Water Pollution Control Act of 1972, Con Ed has to obtain a permit from the Corps of Engineers before any rock fill can be deposited in the Hudson River. Several federal and state agencies, including the office of the New York State Attorney General, are indicating that at the Corps' permit hearings a number of the same issues that have been fought over since 1965 will be raised anew.

Con Ed officials could hardly feel anything other than exasperation at the interminable, convoluted proceedings in which they are enmeshed. Nevertheless, the fact that certain of the key issues in *Scenic Hudson* remain unresolved after almost 10 years of litigation is perhaps more fairly attributed to the intrinsic difficulty of those issues than to faulty or redundant laws and procedures.—LUTHER J. CARTER

Briefing

Land Use Bill Appears Dead for this Congress

Land use legislation is apparently dead for the remainder of the 93rd Congress, and its sponsors have small hope of reviving it until the Watergate scandal and the presidential impeachment issue have been resolved. The land use bill, after finally being reported to the House floor from the Rules Committee where it had been stuck (*Science*, 22 March), was rejected on 11 June when the House voted 211 to 204 not to take it up.

Representative Morris Udall (D–Ariz.), chairman of the Interior subcommittee on environment and the leader on land use legislation in the House, later joined Senator Henry M. Jackson (D–Wash.), sponsor of the land use bill passed by the Senate, in a postmortem news conference. Jackson and Udall agreed that the legislation was stymied because, as Jackson put it, it had become "an expendable pawn in the White House trading game of impeachment politics."

Until a few months ago the Nixon Administration had supported land use legislation similar to the Jackson and Udall bills. In fact, it was at the Administration's urging that those bills emphasize the need for the states to assume ultimate responsibility for control of critical areas, such as wetlands or the area around a major airport, and critical uses, such as the development of a new community or a major industrial facility. The President did not withdraw his support for the legislation until after a meeting in early February with Representative Sam Steiger (R–Ariz.) and a dozen other Republican "hard hats" of the kind Nixon seems to be looking to for help in escaping impeachment.

Senator Jackson hopes to save his land use bill by having the Senate attach it to some unrelated House-passed measure in which the White House has an interest. But Udall, although willing to have a go at this strategem, is not optimistic.—L.J.C.

APPOINTMENTS

Robert A. Plane, former provost, Cornell University, to president, Clarkson College of Technology. . . . **Joseph M. Zannetti, Jr.**, executive assistant for public affairs, Sandia Laboratories, to president, University of Albuquerque. . . . **William H. Patterson**, provost, University of South Carolina, to president of the university. . . . **Jerald C. Walker**, vice president for university relations, Southwestern University, to president, Baker University. . . . **Oakes Ames**, chairman, physics department, State University of New York, Stony Brook, to president, Connecticut College. . . . **Orville G. Brim, Jr.**, former president, Russell Sage Foundation, to president, Foundation for Child Development. . . . **Frank T. H. Rhodes**, dean, College of Literature, Science and the Arts, University of Michigan, to vice president for academic affairs at the university. . . . **Leonard Laster**, executive director, assembly of life sciences, National Academy of Sciences, to vice president for academic and clinical affairs and dean, College of Medicine, State University of New York Downstate Medical Center. . . . **Alfred J. Bollett**, chairman, medicine department, Medical College, Georgia School of Medicine, to chairman, medicine department, Downstate Medical Center, State University of New York.