

third highest energy consumption per capita, behind the United States and Canada. Naturally, it also suffers awful air quality and health problems. There are two cures: cut down on consumption and clean up on generation. The country is trying the first on its own, but will need help with the second.

Industry is also responsible for the country's airborne ills. In pushing for industrialization, East Germany used the plants it inherited after World War II, placed in southeast Germany to avoid Allied bombers. Chlorine manufacture, aluminum smelting, petrochemical refining—processes that use vast amounts of energy—have continued ever since, with outdated equipment and “with no heed for the environment,” says environmental planner Lütke. Calls throughout the 1960s and 1970s to shut down the worst offenders went unheeded, and actually backfired. Threats of closure meant that “they spent no money on environmental equipment.” Pollution grew.

No new science and technology is needed to fight the filth, just investment in modern factories and equipment. The East Germans have, for example, installed western-built scrubbers to clean smokestack fumes—but at only two power stations; it was all they could afford.

“It's a question of money,” says Wolfgang Mundt, director of the Institute of Atmospheric Research and Geomagnetism. Mundt fears that an expanding economy will require more—not less—energy and that as supplies of lignite are becoming exhausted, East Germany is moving to even dirtier fuels.

Although he recognizes a short-term problem, Lütke is hopeful that investment by the West will create new, energy-efficient factories. The West German environment ministry has set aside DM 1 billion (\$600 million) over the next 4 years for joint projects to upgrade industry and reduce emissions. The money is intended to entice private investment, not replace it. One of the first projects is a DM-7-million contract for smog detectors to be made in West Germany and fitted in East Germany, helping industry there to comply with recent antismog legislation.

On the generating side, nuclear power cannot help replace brown coal, for political reasons. East Germany has four Soviet-built reactors, but two have already been shut down as a result of pressure from West Germany. “They are not up to western Europe's standards of security,” Lütke admits. A spokesman for the West German environment ministry said a joint team was investigating the reactors to see whether they could “reach the same standards as our reactors. They may have to be shut forever.

There is no question at the moment of building new nuclear reactors.” Other substitutes for brown coal may be developed. Lütke foresees a shift to oil and gas, even though those resources will have to be imported. “Our country will be able to make new products for the world markets, and then we will be able to import gas and oil,” says Lütke, who is nothing if not optimistic.

While they wait for investment and new technology to help them clean up their act, the East Germans have not been idle. As an emergency measure the recent interim government quickly shut down the worst offenders. An aluminum plant, a viscose manufacturer, and a copper and silver refinery have closed down in the past year. Several more are slated to stop in the next few months. That will reduce energy consumption. The overall plan calls for lignite production to be cut from 300 million tonnes last year to 200 million tonnes this year.

He is less sanguine about the effects of East Germans replacing their ancient automobiles. East Germany has roughly one car for every five people, compared to West Germany's one for every two people. (The U.S. boasts one for every 1.5.) Lütke reckons it will take 10 years to reach West Germany's level of auto engineering. Long before that, as standards of living rise, East Germans will trade up, mostly to older cars

from West Germany. That fleet will seem cleaner than the present one, but will need costlier fuel and create more problems than it solves. New old cars, probably drop-outs from West Germany's ever more stringent emissions tests, could give environmentalists an entirely new headache in the form of nitrous oxides. At present, Lütke says, the dirty exhaust contains mostly soot and carbon monoxide; nitrous oxides are not a major problem. But they may become one.

The overall environmental plan includes more waste management and a new series of national parks and reserves, an interesting portion of the peace dividend as the army gives up some of its training grounds. Will all this come about? Lütke concedes that in the past ministries other than his had the upper hand. “We have been in second place, and the state of our environment shows that. But,” he adds, “industry is starting to see that the way of the last 20 years cannot be the way of the next 10.”

Steinberg, the new minister, though not ready to talk about plans for East Germany's environment, is believed to be sympathetic to Lütke's report. A spokesman for Steinberg's party, the Christian Democrats, which gained the most seats in March's elections, said: “First we have to form a government. Then we will see about policies.” ■ JEREMY CHERFAS

NIH: The Endless Search

The search for a new director of the National Institutes of Health that began last summer may finally bear fruit as this summer begins. While a special panel of advisers to the Secretary of Health and Human Services (HHS) has been trying to redesign the top spot at NIH to make it attractive to an attractive candidate (*Science*, 9 March, p. 1176), the search committee has produced its second short list of men for the job.

Included are David Korn, dean of medicine at Stanford, and Leon Rosenberg, dean at Yale. *Washington Fax*, a biomedical newsletter, reports that Claude Lenfant, director of the National Heart, Lung, and Blood Institute at NIH, and Carl Kupfer, director of the National Eye Institute, are on the list. Another “insider” candidate is rumored to be Frederick Goodwin, head of the Alcohol, Drug Abuse, and Mental Health Administration. However, speculation about the latter three “candidates” is tempered by the fact that a number of search committee members want someone from the outside for the director's job.

The advisory committee that has been working to restore to the NIH directorship authority that has eroded as HHS officials assumed more decision-making control will hold its third and final meeting within the next couple of weeks. James O. Mason, assistant secretary of health, has agreed that the job will not be offered to anyone until that committee has its last shot at writing a new job description for the post.

Earlier efforts to recruit a director came to a miserable end when a mid-level staffer in the White House personnel office asked the search committee's previous nominee, Washington University chancellor William Danforth, about his views on abortion. Declaring that such a litmus test was utterly inappropriate, Danforth withdrew. The White House has since said that abortion will no longer be the key determinant in evaluating candidates for NIH.

That pledge may soon be put to the test. On sensitive issues like abortion and fetal research, Rosenberg and Korn are clearly liberals by the Administration's standards.

■ BARBARA J. CULLITON