

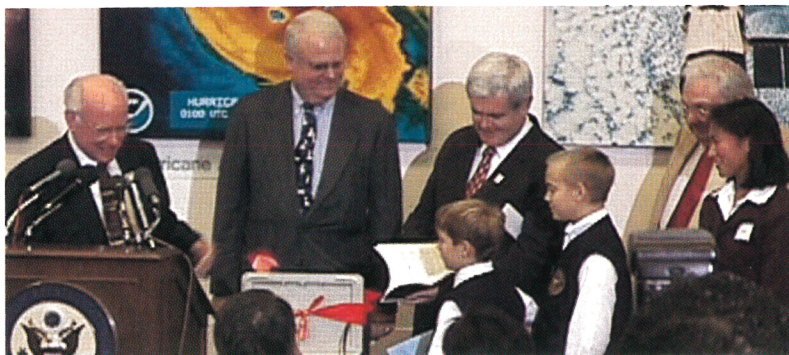
Science Policy Report Prepared by Congressman Ehlers Proposes a Tune-Up, But, Say Critics, No Major Repairs

On 24 September, Representative Vernon J. Ehlers, the Michigan Republican who is the first research physicist ever elected to Congress, released his anxiously anticipated report that is meant to be a sequel to Vannevar Bush's "Science—The Endless Frontier." In 1945, Bush, an MIT engineer who served as Franklin Roosevelt's unofficial science adviser, wrote a report that became the basis of federal science policy throughout the next half-century. Although some policy wonks in Washington predict that Ehlers's report will impel Congress to come to grips with many thorny problems in the nation's scientific enterprise, critics contend that its three dozen recommendations offer few new directions for, say, collaborating in international projects, improving science education in the precollege years and limiting R&D for nuclear weapons and other defense programs.

At a press briefing marking the document's release, House Speaker Newt Gingrich, a Georgia Republican, declared that Ehlers's report would start, not end, the process of building a national consensus on science policy. In the next four or five years, he noted, "there has to be a very important national dialogue" on the scope, management and scale of the country's science and technology enterprise. "This report is a very good beginning, and I think that most of the points it makes I agree with," said Gingrich, who had assigned Ehlers the task of preparing the report. "But it only scratches the surface." To the scientists and journalists in the room, he declared: "Come back at us and challenge us to do an even more dynamic and bolder and risk-taking Phase Two."

A somewhat different spin was put on the report by F. James Sensenbrenner Jr, the Wisconsin Republican who chairs the House Science Committee, on which Ehlers serves as vice chairman. "The clear message of this report is that, while not exactly broke, America's science policy is nonetheless in need of some significant maintenance," Sensenbrenner said. "This is not, then, a visionary document, but a document for visionaries. The nation's scientific enterprise is much too important to be left on auto-pilot."

The 74-page report, "Unlocking Our Future: Toward a New National Science Policy," was prepared in just about one year by Ehlers and a staff of two, at a cost of \$150 000. According to Ehlers, it is the first science policy study of its type to originate in Congress—though



First phase of a science policy: From left, Ehlers, Sensenbrenner, Gingrich and Brown.

previous studies had been conducted in the mid-1980s and in 1992 by the staff of the Science Committee, but these never received wide attention. In 1994, the White House Office of Science and Technology Policy (OSTP) issued "Science in the National Interest," in which the Clinton Administration pledged to maintain world leadership in basic science, mathematics and engineering, but set no funding goals beyond suggesting that the US might someday match Japan and Germany by allocating about 3% of GDP to Federal R&D.

Ehlers's report sets no such target, but calls upon the US to provide "stable and substantial" funding for scientific research, with basic science its priority. It also states that the nation needs to "maintain diversity in the federal research portfolio" and promote "creative, groundbreaking research" if the country is to continue to prosper in the next century.

The main trouble with Ehlers's conclusions is that the legislative branch has a difficult time establishing policy and examining processes. Bush's report recommended a science policy that the executive branch took five years to carry out. The 1994 OSTP document offered some broad themes about the benefits of science, but didn't present Congress with any mandate to spend more on certain programs or inform the funding agencies on their R&D priorities. Those in the science community who clung to the hope that the Ehlers report would propose coordinated approaches to funding in Congress were disappointed.

Some Democrats say that Ehlers underestimated the difficulties of delivering a forceful message about science policy and ended up leaving untouched such major issues as how to set priorities and how to deal with new scientific disciplines. The report, said George E. Brown Jr of California, the

senior Democrat on the Science Committee, "doesn't reflect the more advanced thinking about changes that need to be made—in particular, the responsibility of science to connect its advances to the benefit of all Americans."

The report speaks of three basic challenges: First, it states, "we must ensure that the well of scientific discovery does not run dry, by facilitating and encouraging advances in fundamental research." Second, "we must see that this well of discovery is not allowed to stagnate." And finally, "we must strengthen both the educational system we depend upon to produce the diverse array of people . . . who draw from and replenish the well of discovery, as well as the lines of communication between scientists and engineers and the American people." Ehlers reiterates the three main forces cited by Vannevar Bush that drive the need for R&D—national security, health and the economy—Ehlers introduces a fourth factor: environmental issues.

The report emphasizes Republican values: With the end of the cold war, "while economic prospects appear favorable, growth of Federal entitlements such as Social Security, health care and welfare, threaten to overwhelm the Federal budget and constrain discretionary spending—including funding for science—even further."

Among its main points: "In general, research and development in federal agencies, departments and national laboratories should be highly relevant to, and tightly focused on, agency or department missions, and must focus on essential programs that are well-managed, long-term, high-risk, noncommercial, and have great potential for scientific discovery."

The report is available at http://www.house.gov/science/science_policy_study.htm

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