

lighted” by Wolf’s emergence on science issues.

“Frank Wolf is a very serious man,” Gingrich said. “He hadn’t looked much at this issue [science and technology], but when he did, I think he concluded that what we’d been saying was right.” What Gingrich has been saying is that the US is doing a terrible job supporting science, and is “unilaterally disarming in high-energy physics at a time which may well be one of the most exciting periods of physics research in history.”

As the government’s support for basic science slips, Gingrich said, it falls on scientists to “behave like citizens” and support Wolf and other science advocates in Congress. Such support is particularly important for the interest-paid loan bill because it is an “important first step” for Wolf.

When asked why scientists should support a congressman who opposes stem-cell research and the global warming treaty, Gingrich talked about the nature of politics. “It’s real

simple. If somebody has a really good idea that you think will really help the country, are you for the idea? Nobody says you have to love Frank Wolf. All of these [science organizations] say they wish it would be bipartisan, then they finally get a Frank Wolf, who shows up for science, and they start finding reasons to avoid helping him. I’m not asking them to make him scientist of the year. I am asking them to ask the legislators to cosponsor his bill, because it is the right bill.”

Wolf is straightforward about why he opposes some issues that many scientists support. “I don’t care if you are a Nobel Prize winner, there are some pretty powerful moral issues involved,” he said.

He intends to keep the pressure on the president to make science a national priority. “The stars are aligned,” he said. “This is an opportunity and an obligation, probably even a moral obligation, for the administration to set off on a new path.”

Jim Dawson

US has minor nonproliferation research going on now, mostly at Department of Energy (DOE) laboratories, Hagengruber said, but it is not nearly on the scale that is needed.

“We’re recommending that Congress, at a minimum, put \$5 million [this year] into this research,” he said. “The dollar amount isn’t in the report, but that is . . . enough to take the current programs and give them some real momentum.” The study group would like to see \$20 million this year, he said, which would be enough to expand nonproliferation research beyond the labs to universities and other organizations.

The second recommendation calls for making proliferation resistance a high priority in the design and development of future nuclear energy systems. If new nuclear energy facilities are built in the US, Hagengruber said, they need to be a “showplace for the implementation of all of these [proliferation-resistant] advanced fuel technologies. We believe that those facilities should be open to international tours and should exemplify the technologies that the US would suggest ought to be implemented on an international basis.”

The third recommendation is to increase international nuclear security and safeguards cooperation. The US has a history of working with Japan and Russia on nuclear safety issues and needs to expand those efforts, the report says.

The final recommendation focuses on whether spent nuclear fuel should be reprocessed. “There is no urgent need to initiate reprocessing or to develop additional spent fuel repositories in the US,” the report says. However, language in the House Energy and Water appropriations bill orders DOE to “focus its research . . . to develop advanced reprocessing” of spent nuclear fuel. The Senate has yet to deal with the reprocessing issue. Officials in the Carter administration in the late 1970s stopped reprocessing.

The APS group is divided on the wisdom of reprocessing, with SLAC’s Burton Richter and several others supporting it, and Princeton University’s Frank von Hippel and others opposing it. Instead of “forcing the schism at this point,” Hagengruber said that the study group decided it is too early to make a decision on reprocessing. “Our hair isn’t on fire,” he added.

So Hagengruber, working with APS lobbyists, is trying to stop the push in Congress to resume reprocessing and at the same time trying to raise concern for the nonproliferation issues involved in restarting the US nuclear power program.

Jim Dawson

Proliferation Is Key Issue in Nuclear Power Resurgence

The momentum for developing a new generation of nuclear power plants has been building in the US for several years, with the Bush administration calling for a nuclear power “renaissance,” science panels urging government funding of new plant startups, and Congress aiming in increasing amounts of money at nuclear energy. Even some environmental organizations have noted that nuclear power might be an immediate solution to global warming.

But scientists from the American Physical Society’s (APS’s) nuclear energy study group, led by University of New Mexico physicist Roger Hagengruber, are cautioning policymakers that any resurgence in US nuclear power will ultimately hinge on the resistance of new power plants and their associated uranium-enrichment and fuel-fabrication facilities to proliferation of weapons-grade nuclear material. In a report issued in May, the group focused on the need for systemic proliferation resistance in civilian nuclear power programs and said that “whether or not the United States constructs new nuclear power plants over the next quarter century, it is vital to US national security that the US remain engaged in the development of proliferation-resistant nuclear energy technologies.”

The unfortunate fact about nuclear energy, the report notes, is that “the technologies used in peaceful nuclear power programs overlap with those used in the production of fissionable material for nuclear weapons.” So as the global demand for electricity increases—by more than 50% by the year 2025, according to the report—so will the number of nuclear power plants. And the best way to prevent countries from using their nuclear power complexes to create fuel for weapons is through strong nonproliferation measures.

In an interview between visits to Congress to lobby for the report’s recommendations, Hagengruber said, “The reason for the study is we recognized that the long-term support for nuclear energy will turn not on better technology or reduced costs, but on the degree to which the expansion of nuclear energy can be done without expanding the possibilities of proliferation.” And the US, which has had a stagnant civilian nuclear power program for decades, must be a player in the new generation of nuclear power or lose its technological leadership to other countries, he said.

The first of the report’s four recommendations calls for the US to reestablish a strong R&D program on advanced safeguards technology. The