

## STEM EDUCATION

# DOE Reworks Student Initiative to Prepare Energy Researchers

Having learned that bigger isn't always better, the U.S. Department of Energy (DOE) has downsized a proposal to train more scientists and engineers to work in a low-carbon economy.

Last year, Energy Secretary Steven Chu won President Barack Obama's backing for a \$115 million education initiative dubbed RE-ENERGYSE (REgaining our ENERGY Science and Engineering Edge). It was designed to support activities along the entire training spectrum, from postdoctoral fellowships to hands-on learning for elementary students, with a special focus on preparing technicians for jobs in the burgeoning clean-energy sector.

Federal lawmakers weren't very impressed (*Science*, 10 July 2009, p. 130). They worried that RE-ENERGYSE overlapped with other federal activities to improve science, technology, engineering, and mathematics (STEM) education, notably those at the National Science Foundation (NSF) and the Department of Education, as well as at the Workforce Development for Teachers and Scientists program within DOE's Office of Science. In the end, Congress did not give DOE any money for RE-ENERGYSE in its 2010 budget.

But this month, the president's 2011 budget request contains a slimmed-down RE-ENERGYSE, with a price tag of \$50 million—\$35 million for higher education and \$15 million for technical training and precollege outreach. The need for more skilled workers hasn't gone away, says Kristina Johnson, under secretary for energy, who helped to craft the program and would oversee it. But DOE has learned its lesson, she says: "We've scaled back. We're going to start small, and we'll try to build it up once we see what's working."

For example, Johnson says that DOE's workforce development program, overseen by Science Under Secretary Steven Koonin, is "taking the lead" on graduate research fellow-

ships, with a request for 170 new fellows in 2011 to join a class of 160 funded this year. In comparison, the new RE-ENERGYSE would support only 60 fellows in 2010, instead of the 150 to 200 requested last year. However, RE-ENERGYSE's fellows would be encouraged to work on clean-energy topics, while the Office of Science fellows would be spread across most basic-science disciplines.

Johnson has also trimmed plans for another key element in the initiative: the creation of master's degree programs in interdisciplinary energy studies. DOE is requesting money for two rather than four such collaborations across departmental lines. The idea is modeled on an engineering management program that Johnson expanded while dean at Duke University in Durham, North Carolina.

RE-ENERGYSE's activities at the precollege level "haven't been defined yet," Johnson admits. But there, too, the goal is to produce more clean-energy scientists and engineers. "This year, about 6% of entering college students say they are interested in engineering, and about 4.4% of them graduate with an engineering degree," she explains. "It's pretty hard to compete globally when you're relying on such a small segment of the population to provide the innovations we need. We know from studies NSF has done that we lose kids in grades three to five. And if they don't maintain an interest in science and math, they won't take enough courses to be able to become an engineer."

A congressional aide on the spending panel that controls DOE's budget says that members were taken aback last year by the size of the initiative as well as its scope. "We're still concerned about whether RE-ENERGYSE complements or overlaps with existing STEM education programs," says the aide. But "it sounds like they heard us."

—JEFFREY MERVIS



*"We've scaled back. We're going to start small."*

—KRISTINA JOHNSON,  
DOE

## Science Insider

### From the *Science* Policy Blog



The U.S. National Institutes of Health (NIH) has widened its definition of what constitutes a **human embryonic stem cell** to keep up with what's happening in the lab. The new definition would include lines derived from embryos before the blastocyst stage. <http://bit.ly/b8jjy>

The U.S. government has formally closed its investigation of **Bruce Ivins**. A 92-page report summarizes why it believes the Army researcher who killed himself in July 2008 was the 2001 anthrax mail bomber. <http://bit.ly/daAtvZ>

A veteran science policymaker is the new head of the European Research Council's scientific council. **Helga Nowotny** is replacing founding president Fotis Kafatos. <http://bit.ly/ddPr4L>

This week's launch of an **instrument to measure the extent and thickness of polar ice** has been delayed after the European Space Agency became concerned about the Russian rocket that will place the CryoSat-2 spacecraft into its highly inclined orbit. <http://bit.ly/caR6qg>

New York state officials have accused a former researcher from the University at Buffalo of hiring three actors to give false testimony that helped clear him of research misconduct charges in a 2004 case. **William Fals-Stewart**, an expert on addiction, was arrested and charged with attempted grand larceny, perjury, identity theft, and other crimes. <http://bit.ly/cHiAVZ>

The man in charge of the recent Copenhagen climate conference, **Yvo de Boer**, has resigned his United Nations post and will join the consulting giant KPMG to work on climate and sustainability issues. <http://bit.ly/9XdMNO>

**Raynard Kington**, who ran NIH during the transition from Elias Zerhouni to Francis Collins, is leaving as deputy NIH director to become president of Grinnell College in Iowa. <http://bit.ly/cDkuX8>

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