

The author, far right, joins International Energy Office staff for breakfast at the Founding Farmers restaurant in Washington, D.C.



Academic's Year

Science fellow looks back on time with the Department

By Suresh V. Garimella

Working as a Jefferson Science Fellow at the State Department has been fascinating and deeply rewarding. Over the course of the year, I learned—and promoted learning—about policy issues surrounding supply disruptions of rare earth elements, Middle East uprisings and their influence on energy access and the Fukushima earthquake and its effect on global nuclear policy.

Recognizing the critical role of science, technology and engineering in the formulation and implementation of policy, the Department initiated the Jefferson Science Fellows program

in 2004, thanks in part to the vision of George Atkinson, then science and technology adviser to the Secretary of State. The program established a new model for engaging experienced and accomplished university professors in the foreign policy world. Paid by the home universities, the fellows serve for one year at the Department or U.S. Agency for International Development as advisors for scientific and engineering issues, followed by at least five years during which they are available as consultants. The program is hosted and overseen by the Office of the Science

and Technology Adviser to the Secretary and administered by the National Academies.

Bringing Expertise

Jefferson Science Fellows lead research programs at their home institutions while concurrently maintaining their professional responsibilities at the Department or USAID. They bring expertise in a wide array of fields, including women's health, biotechnology, food security, energy and climate change, geology and seismology and space. I was one of 12 fellows who served in the 2010–2011

academic year. The 13 fellows for 2011–2012 will form the largest group so far seen in the program, bringing the cumulative total to 66. Upon completing the program, the fellows will return to their universities to serve as science and engineering “ambassadors” to academia and global research networks.

Because my background includes work on thermal management of electronics and computers, nanotechnology, energy efficiency and waste heat recovery, and renewable energy, I spent my fellowship with the International Energy

and Commodity Policy Office of the Bureau of Economic, Energy, and Business Affairs. I hosted bi-weekly brownbag lunches for a Clean Energy Futures Working Group that featured expert speakers, and coordinated the March 2011 three-day Washington Energy Seminar, which briefed officers across the U.S. government on energy issues. I was also a member of the science and technology working group of the U.S.–Russia Bilateral Presidential Commission and served as a delegate to the Committee on Energy Research and Technology of the International Energy Agency. As a member of the interagency roundtable working group, I helped formulate diplomatic and policy solutions to address the recent supply shortages of rare earth elements, which are used in a number of technologies such as wind turbines and cellular phones.

Different Worlds

To complete this work, I needed to learn about interagency operations and the different

energy policy equities of each agency. While I was initially tempted to search for technical solutions, I quickly learned to look at the diplomacy and policy angles in discussions.

My experience was particularly fruitful because my host, Peter Secor, saw me as someone who could serve as an in-house technology expert. Jefferson Fellows are only useful if their hosting office values the fellows' experience and connections to the global scientific community.

It is crucial for the fellow and the hosting office to identify issues to which the fellow can contribute. One challenge is that the scientific and academic world rewards factual detail and thoroughness of analysis, whereas the diplomacy and policy worlds must take positions and make pronouncements on short notice, and often on unfamiliar topics. I marvel at the skill involved with making these kinds of decisions. Despite constantly dealing with transitions, rotations and the uprooting of families, Foreign Service officers gamely take on new portfolios in two- or



The author, first row second from left, gathers with his research group at a goodbye party held before he left to begin his fellowship.

three-year chunks of time. While FSOs cannot study issues in detail, they are adept at cutting through the fog and identifying the critical issues that affect and dictate policy.

During my time as a Jefferson Fellow, I asked questions and contributed comments and advice from a scientific perspective. I believe my Department and interagency colleagues found this a unique and valuable addition

to the mix. Building stronger bridges between America's universities and the government brings fresh perspectives to Washington and expands the pool of young scientists and engineers interested in public service, and that's what the Jefferson Science Fellow program is all about. ■

The author is a distinguished professor of engineering at Purdue University.



Oisin Lyons, center, is introduced at a Fulbright ceremony at the residence of Embassy Dublin Deputy Chief of Mission John Hennessey-Niland, far right. Oisin joined Purdue University as a Fulbright scholar in September.