A HAPPY NEW YEAR FOR SCIENCE -- AND STATE

Today is New Year's Day. For me, it's usually a low-key family holiday during which we make hand-crafted, plate-sized gingerbread cookies.

This year I plan to make one of Obama in honor of his inauguration on Jan. 20. That day will mark the beginning a new year far more significant than any arbitrary turn of the calendar. Finally, we scientists will inaugurate someone who understands that a serious national investment in science, technology, engineering and mathematics for something other than war will make us more competitive in the world of ideas. This is especially true for ideas that will help wean us from our dependency on foreign oil and reassert world leadership on climate change.

The American Association for the Advancement of Science is our nation's most powerful science organization. It strives to be nonpartisan and has carefully examined the Obama science agenda; its assessment is at http://election2008.aaas.org/comparisons/obama.shtml. Here are key points of the agenda that are important for Connecticut:

*Competitiveness and Innovation: Obama's plan to double federal funding for basic research will benefit the many universities and colleges in our state, because faculty can bring those dollars home to their respective institutions. Improving the H-1B visa program will also allow exceptionally skilled workers from overseas to carry out U.S. research and to produce technology with an American label.

*Education and Workforce: Federal education programs in science, technology, engineering and mathematics will receive an $18 billion boost to enhance access to technology in the schools and increase the shrinking number of native-born students pursuing these fields. With its high concentration of public and private schools, Connecticut is likely to benefit more than most states.

*Health: The new administration hopes to create an independent institute to review the efficacy and cost-effectiveness of medical treatments. It will also invest $10 billion in an electronic health information system needed to implement standards-based access to proper care across the nation. The insurance companies in our state will thus be held more accountable and rendered more efficient. Obama's goal of targeting $1 billion for autism research is a personal boost for me, having raised an autistic son who is now 28 years old.

*Energy and Environment: Re-establishing U.S. leadership in international climate change agreements, rather than boycotting them, will raise our international standing. Obama's goals are to reduce CO(2) emissions through a free-market cap-and-trade system, targeting an 80 percent reduction from 1990 levels by 2050. He hopes to reduce the energy consumption of our economy by 50 percent by 2030, with at least 10 percent of that electricity coming from renewable sources by 2012. His non-energy environmental policies place protection of our water supplies as a top priority.

*National and Homeland Security: The administration will shift some attention away from terrorism to the larger threat of disease pandemics, particularly avian flu. This will be of special benefit to densely populated states such as our own. On the threat from nuclear weapons, Obama proposes to upgrade methods for tracking and controlling spent fuel from power plants. This will include reporting leakage. On most days, Connecticut lies immediately downwind of New York City, a highly vulnerable target.

*Transparency: Obama wants to use information technology to make government as transparent as possible. Pork, boondoggles, overpriced contracts and pet programs will be seen for what they are.
Where will the money come from? It's pretty obvious to me. We live in a world where the cost of offensive military invasions, interventions and occupations greatly exceeds that of all conceivable science, technology, engineering and mathematics initiatives put together. The outlay in the 2008 federal budget for the so-called Department of Defense and the so-called global war on terror was more than $627 billion.

Saying Happy New Year during a time of national economic pain is more than a gesture of optimism and good will. It's also a prediction of good things to come.