

Ms. Evelyn Langlieb Greer, Member

**SUBJECT: RESOLUTION SUPPORTING PROPOSED BRAINPOWER BILL**

**COMMITTEE: INNOVATION, EFFICIENCY & GOVERNMENTAL RELATIONS**

Numerous national organizations, both in the academic and business world, have become increasingly concerned about the declining focus of American students on math and science education. Recently, a bipartisan group of legislators and business leaders have come together to create a proposal to stop the slide and create an initiative that would please business, labor, parents, teachers, students - and be good for the country.

The initiative is a creation by the best scientific minds to keep the United States in the forefront of innovation and technology. The initiative is aimed at assuring this country's competitive position in the new global economy and thereby improving prospects for more American families being able to enjoy comfortable middle-class lives.

The major parts of the plan have emerged in a series of reports from business, academic and government groups - most recently in that of a blue-ribbon panel of the National Academy of Sciences headed by Norman Augustine, the retired CEO of Lockheed Martin ([www.nationalacademies.org](http://www.nationalacademies.org).) They all recite similar warning signs that America's current healthy economy conceals significant long-term threats to our prosperity. There has been steady erosion in investment in the kind of brainpower that keeps a nation competitive - and a consequent decline in American inventiveness.

Compared to 1970, the percentage of America's gross national product invested by the federal government in physical science research has declined by half. Asia and Europe are graduating thousands more engineering and science majors every year than the United States - and the gap is growing. Almost half of U.S. patents now go to foreign-owned companies and foreign-born inventors. High school students test poorly in math and science Compared to those of our major trading partners.

Looking at these statistics and listening to educators and business executives who offer personal testimony about the difficulty of attracting students to math and engineering or recruiting workers with those skills, a bipartisan group of legislators are beginning to respond.

Amongst other recommendations, the "Brain Power" bill recommends the following steps, which are of specific importance to the Miami-Dade County Public Schools efforts to "raise the bar" on the quality of education in our schools:

Tackle the talent supply problem: recruit 10,000 future science and math teachers each year and award them four-year college scholarships, with big bonuses to those who teach in underserved schools;

- give additional training to 250,000 current math and science teachers;
- provide large grants to 200 promising young researchers;
- Create an advanced research projects agency in the Department of Energy; provide 25,000 competitive scholarships a year to undergraduates in physical sciences, engineering and math and fund 5,000 new graduate fellowships a year in those fields.
- Make it easier for foreign students in math and science fields to obtain visas for study in the United States and ease their way if they want to remain here to work;

**ACTION PROPOSED BY  
MS. EVELYN LANGLIEB GREER:**

That The School Board of Miami-Dade County, Florida:

1. Endorse the concept of the “Brain Power Bill”, which requests that the federal government target new funds for a national effort to increase the quality of and focus on math and science education by:
  - a. recruiting 10,000 future science and math teachers each year by awarding them four-year college scholarships, with big bonuses to those who teach in underserved schools;
  - b. giving additional training to 250,000 current math and science teachers;
  - c. providing large grants to 200 promising young researchers;
  - d. creating an advanced research projects agency in the Department of Energy; provide 25,000 competitive scholarships a year to undergraduates in physical sciences, engineering and math and fund 5,000 new graduate fellowships a year in those fields.

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## BUSH CAN MAKE 'BRAINPOWER' BILL A 2006 PRIORITY

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Call it an early Christmas gift. A number of legislators of both parties have put the wrappings on a proposal for next year that could be the best present under President Bush's tree - an initiative that would please business, labor, parents, teachers, students - and be good for the country.

Inside the package is a creation framed by the best scientific minds to keep the United States in the forefront of innovation and technology. It is aimed at assuring this country's competitive position in the new global economy and thereby improving prospects for more American families being able to enjoy comfortable middle-class lives.

The elements have been embraced by key legislators across the political spectrum. But none of them has a personal stamp on the proposal that would prevent the president from making it his own - if he decided to highlight it, as some of them have suggested, in next month's State of the Union address, and then underscored his commitment by putting the needed funds into his budget.

The major parts of the plan have emerged in a series of reports from business, academic and government groups - most recently in that of a blue-ribbon panel of the National Academy of Sciences headed by Norman Augustine, the retired CEO of Lockheed Martin. [Augustine's article on this topic appeared in this space in The Miami Herald last Sunday.]

They all recite similar warning signs that America's current healthy economy conceals significant long-term threats to our prosperity. There has been a steady erosion in investment in the kind of brainpower that keeps a nation competitive - and a consequent decline in American inventiveness.

Compared to 1970, the percentage of America's gross national product invested by the federal government in physical science research has declined by half. Asia and Europe are graduating thousands more engineering and science majors every year than the United States - and the gap is growing. Almost half of U.S. patents now go to foreign-owned companies and foreign-born inventors. Our high school students test poorly in math and science compared to those of our major trading partners.

### Promoting action

Looking at these statistics and listening to educators and business executives who offer personal testimony about the difficulty of attracting students to math and engineering or recruiting workers with those skills, a variety of legislators are beginning to respond. Three House Republicans - Reps. Frank Wolf of Virginia, Vern Ehlers of Michigan and Sherwood Boehlert of New York - sponsored an "innovation summit" last week that brought university presidents and corporate CEOs to the Commerce Department to promote action on this challenge.

The House Democratic Caucus has launched its own task force on innovation and last week, Minority Leader Nancy Pelosi held a meeting of its members with Silicon Valley executives. Things are moving even faster in the Senate. Republican Lamar Alexander of Tennessee and Democrat Jeff Bingaman of New Mexico are preparing legislation, along with Republican Pete Domenici of New Mexico and Democrat Barbara Mikulski of Maryland, that embodies the recommendations of the Augustine task force. Connecticut Democrat Joe Lieberman and Nevada Republican John Ensign have teamed up on a related bill.

They call for a coordinated and sustained attack on the problem, one that Alexander and Bingaman say would cost the country about \$9 billion a year. That is no small sum, but it is about one-tenth of what the Iraq War has been costing us annually. The steps to take:

- \* Boost federal investment in basic research 10 percent a year over the next seven years.

- \* Tackle the talent supply problem: recruit 10,000 future science and math teachers each year and award them four-year college scholarships, with big bonuses to those who teach in undeserved schools; give additional training to 250,000 current math and science teachers; provide large grants to 200 promising young researchers.

- \* Create an advanced research projects agency in the Department of Energy; provide 25,000 competitive scholarships a year to undergraduates in physical sciences, engineering and math; fund 5,000 new graduate fellowships a year in those fields.

- \* Make it easier for foreign students in those fields to obtain visas for study here and ease their way if they want to remain here to work; expand immigration opportunities for people with those needed skills; provide tax incentives for U.S.-based innovations.

- \* Expand access to broadband communications.

This is a large order, but much more practical than Bush's earlier promise of a manned mission to Mars. Alexander quotes his mentor, the late Bryce Harlow, an Eisenhower aide, who taught him that "everything that comes to the White House is important, but only a few things are presidential." This, says Alexander, is presidential. And it's there for Bush's taking.