



Bruce Alberts is Editor-in-Chief of *Science*.

## Driving U.S. Energy Leadership

I HAVE JUST RETURNED FROM A TRIP TO CHINA, WHERE THERE IS A TREMENDOUS EMPHASIS on the importance of investing in science and technology for a sustainable future. For the Chinese, business as usual is not an option: It seems obvious to everyone that an economy that continues to expand using available technologies will choke on its own air pollution. Many nations share China's urgent need to shift away from an economy dominated by fossil fuels. Last month, Germany unveiled a bold proposal to move the country toward renewable "green" energies through aggressive policies, which may spur other European nations to follow suit. What about the United States?

Unfortunately, this year's attempt by the Obama Administration to produce a major climate-energy bill at the national level failed. But my home state of California has been more successful, attracting international attention when it passed the Global Warming Solutions Act of 2006 (also known as AB32). This law requires that California's emissions of greenhouse gases be reduced to 1990 levels by 2020, an approximate 30% reduction from those expected otherwise. As a large state with a population of 37 million, California is the second largest emitter of greenhouse gases in the United States. AB32 has therefore stimulated major private-sector investments in renewable energy technologies, aimed at markets that the new rules promise to generate.

But the entire fate of this bold plan, and of the investments in innovation that it stimulates, hinges on a popular vote that will take place in a few days. On 2 November, California voters will consider Proposition 23, a referendum sponsored by out-of-state oil interests that would suspend implementation of AB32 until unemployment in California, now at about 12%, drops to 5.5% or less for a full year. Because this level has been reached only three times in the past 40 years, Proposition 23 would effectively stop the new investments in renewable energy. As critics of California's AB32 are quick to point out, reducing the state's emissions will, by itself, do little to reduce the threat of global warming. But this badly misses the point. The legislation establishes the market opportunities that the entire United States urgently needs if it is to play a major part in reducing the cost of clean energy, and thereby remain a world leader in creating important new industries that boost the economy and benefit human welfare.

Consistent with AB32, in *A Business Plan for America's Energy Future*, seven of the most accomplished business leaders in the United States—Norman Augustine, Ursula Burns, John Doerr, Bill Gates, Chad Holliday, Jeff Immelt, and Tim Solso—call for policies that generate "clear, long-term market signals to create market pull for innovation." Arguing that "the economic, national security, environmental, and climate costs of our current energy system will condemn our children to a seriously constrained future," they also urge a federal investment of \$16 billion per year in clean energy innovation, an increase of \$11 billion over the current annual investment of about \$5 billion.\* Thus, for example, while commending the recent formation of the Advanced Research Projects Agency in the U.S. Department of Energy (ARPA-E), they urge that its budget be tripled, pointing out that ARPA-E was able to fund only 37 of the 3700 proposals that it received in its first year. As these 3700 proposals demonstrate, the United States has an immense innovation engine that is waiting to be unleashed to address the world's huge future needs for clean energy. Its scientists and engineers are noted for their ability to pioneer creative solutions, but they must be challenged and supported to do so at all levels of government.

The public and private investment in energy innovation now totals only about 0.3% of U.S. energy expenditures. California's Proposition 23 needs to be soundly defeated, sending a clear signal to Washington that the people of the United States are ready and willing to mobilize its considerable resources in the vital drive to a sustainable energy future.

— Bruce Alberts

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\*www.americanenergyinnovation.org.