

# San Francisco Chronicle

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Printed on recycled paper

THURSDAY, JULY 31, 2008

sfgate.com

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## OPEN FORUM

# An energy plan we can believe in

By Teryn Norris and Jesse Jenkins

Energy is now the No. 1 issue in the 2008 elections, with both candidates touting new plans to deal with soaring energy prices. Meanwhile, Congress is at a standstill, arguing over the renewal of critical clean energy incentives and a push for more offshore drilling. But above the partisan cacophony is a proposal all Americans can get behind: a new national education initiative to meet the energy challenge.

The United States is in energy crisis. Oil and electricity prices are rapidly escalating, our dependence on imported energy is increasing, and global warming continues unabated, each presenting grave threats to our national interests and security. Solving these interlinking crises requires large strategic investments to spark a clean energy economy and develop cheap and non-polluting energy for every American.

But let's pause for a moment to imagine what a clean energy economy would actually look like: tens of thousands of new highly skilled designers and manufacturers reassembling America's auto fleet and producing the next generation of wind turbines and solar panels. An army of new engineers and contractors rebuilding America's electrical grid, erecting wind farms and solar plants, and retrofitting our homes to save on energy costs. Lab researchers inventing cutting-edge, low-carbon en-

ergy technologies, which entrepreneurial startups and venture capitalists take into the marketplace.

Now contrast this with today's reality: nearly half of our current energy workforce is expected to retire over the next decade, our manufacturing and construction sectors are in steep decline, and American universities are graduating fewer students each year in the crucial fields of science, mathematics and engineering.

We cannot allow these trends to continue, if we are to confront today's energy crisis. It is imperative that we transform our nation's universities, colleges and vocational schools into multidisciplinary hubs of clean energy innovation that will develop solutions to revitalize our economy, end our dependence on imported oil, and address global warming as well as train a new workforce to develop and deploy low-carbon technology and infrastructure.

Fifty years ago, in the wake of the Soviets' launch of Sputnik, the federal government authorized the National Defense Education Act of 1958. The act provided billions of dollars to inspire and train a generation of Americans to confront the Soviet challenge to win the space race. It was a critical first step toward developing the human capital necessary to put a man on the moon and invent the technologies that catapulted our world into the Information Age.

Just as the National Defense Education Act launched America into the space race, overcoming the energy crisis will require new, large-scale public investments in our nation's schools.

Now is the time for a National Energy Education Act.

Such legislation would expand clean energy education through new research grants, graduate fellowships and energy-science-and-policy-focused curricula; financial aid and loan forgiveness for students entering clean energy development fields; building efficiency, clean energy installation, and green manufacturing workforce development programs; and support for "innovation pipelines" that help commercialize new technologies produced in the laboratory.

How much would it cost? Per year, it would require less than the United States spends daily on foreign oil: \$1.5 billion. This would cover half of the tuition every year for nearly 600,000 students at public universities, and over five years it would be proportionate to the total cost of the National Defense Education Act. This program should not occur in a vacuum, of course, but alongside major public and private investments in clean energy technology and infrastructure development. Some of this investment activity is already in place, but much more is necessary and could be funded and incentivized by a modest price on global warming pollu-

tion.

Public investment in clean energy education will more than pay for itself, just as the post-Sputnik education programs did in the 1950s and '60s. These programs accelerated technological development and paved the way for the information-age productivity revolution — from microchips and telecommunications to personal computing and the Internet. Today, a National Energy Education Act would equip a new generation of Americans with the highest-caliber human capital, inspire them to tackle energy as their generational undertaking, and pave the way for new industries and technologies that will drive the U.S. economy for decades to come.

Our generation is ready. As two members of the millennial generation and leaders in the youth energy and climate movement, we have seen a hunger for an inspirational vision and purpose for our nation. We simply need our government to embrace this moment and provide the leadership and resources necessary to confront the American energy challenge.

*Teryn Norris and Jesse Jenkins are associate directors of Breakthrough Generation, a project of the Breakthrough Institute, working to encourage the nation's leaders to invest in a clean energy future.*  
[www.breakthroughgen.org](http://www.breakthroughgen.org)



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A wind tower mechanic works at a wind-power farm in Higashi-Dori, Japan. Energy solutions are a new industry.