

## Newt Gingrich and Jerry Brown Spend \$10 Billion

Two weeks ago The Wall Street Journal kicked off a debate on how best to allocate scarce resources to solve the world's problems. Bjorn Lomborg offered a summary of the latest findings from his Copenhagen Consensus project, where he has enlisted some of the world's top economists to address the issue. Now we're offering views on the subject from top political and business leaders. How would you spend \$10 billion of American resources (either directly or through regulation) over the next four years to help improve the state of the world?

### Prizes to Improve Life

By Newt Gingrich

Historically the greatest improvements in the quality of life have come from two long patterns -- the extension of the rule of law and the development and diffusion of technology.

First, there has been a gradual extension of the rule of law, which protects the weak from the predatory and ensures private property rights, which encourages the accumulation of wealth and the expenditure of effort.

In places like Darfur, Myanmar and Zimbabwe, the extension of the rule of law would do more to improve human lives than any other approach. In authoritarian states like Russia, the reassertion of the rule of law would improve the process of wealth creation and increase the security and prosperity of the middle class.

Unfortunately, the extension of the rule of law is a complex and difficult process and \$10 billion would have little effect on it.

Therefore it would be better to focus on the development and diffusion of technology.

New technologies have been improving life for virtually all of known history (think of fire or the wheel as examples of early technological breakthroughs). Given the inefficiency and slowness of bureaucracies with a four-year time horizon and a limited amount of money, I would favor the use of large tax-free prizes.

Prizes are powerful because they send signals to everyone that they can compete. Furthermore they are payable on achievement rather than on application.

The modern emphasis on peer-reviewed research has three bad side effects. One, it leads people to spend an amazing amount of time on the paperwork of application rather than on actually doing the experiment or undertaking the research. Second, it limits the applications to credentialed people. Third, it is a very cautious process that emphasizes relying on the approval of peers who tend to be cautious.

The Wright brothers could never have gotten peer-reviewed government funding for their airplane; in fact the Smithsonian Institution had failed to invent a workable airplane even though it spent more money than the Wright brothers.

Henry Ford could never have gotten government funding for the development of his first car; he was a shift foreman at the Edison Electric Plant in Detroit when he started.

Thomas Edison could never have gotten a government bureaucracy to subsidize the estimated 49,000 failures by Edison and his assistants that led to the invention of the electric light bulb.

Prizes would be a useful experiment in large-scale breakthroughs.

Here are seven prizes, the first three at \$2 billion tax free and the last four at \$1 billion each tax free (tax free because not paying taxes makes these prizes psychologically worth much more):

- 1) A low-cost vaccine or preventive intervention for malaria -- possibly the single biggest potential improvement in the quality of life in poor tropical countries.
- 2) A modestly priced, mass-manufacturable hydrogen engine for cars, which would be the biggest single contribution to reducing carbon loading of the atmosphere and reducing subsidies through high oil prices to dictatorships.
- 3) A cheap method for turning large quantities of seawater into fresh water.
- 4) A reusable system that could get people into space at 10% of the current cost, thus enabling genuine space tourism and launching an age of exploration.
- 5) The first privately financed permanent lunar base.
- 6) A method for reusing nuclear waste to make Yucca Mountain, Nevada unnecessary as a repository.
- 7) A method of learning math and science that kids like, and that enables us to leapfrog India and China by breaking out of our unionized, bureaucratic curriculum. This would enable us to replace "No Child Left Behind" with a more effective education model that could be called "Every American Gets Ahead."

Mr. Gingrich, a Republican, is a former speaker of the House of Representatives.

## **Saving \$10 Billion With Efficiency**

By Jerry Brown

The cost of energy in the United States, on an annual basis, has now soared beyond \$1 trillion. Our massive purchases of foreign oil represent perhaps the greatest transfer of wealth from one people to another in all human history. And, paradoxically, this wealth transfer is from a far more technologically advanced nation to poorer countries -- some unstable and hostile -- whose only claim is the oil that lies under their ground. Wake up America! We must stop the hemorrhaging of our national treasure, and we need to do it now.

I propose that we take the \$10 billion and invest it in curbing our energy appetite through efficiency programs and incentives. The efficiency I envision would allow us to enhance our quality of life, but do so in ways that reduce the huge quantities of oil, gas and coal that we now consume.

California has kept its per capita electrical consumption flat for the past 25 years -- in significant part through appliance and buildings standards and incentives to adopt ways that get more work out of less energy. I am not talking about some collective hair shirt, but rather about a wide variety of new technologies and designs.

The world is facing a triple threat of unprecedented dimensions: First, the loss of cheap and easily discovered oil; second, explosive energy demand from China, India and other emerging countries as they rapidly improve their standard of living; and third, the climate disruptions caused by CO<sub>2</sub> and other greenhouse gases. None of the three will go away. In fact, each will get progressively worse unless we take decisive action, without delay. America must take the lead in dealing with global energy and climate challenges, and at the same time vastly strengthen its own economy and security.

For too long, the federal government has been slow and unimaginative in setting efficiency standards for appliances and equipment, and in many cases it has set no standard at all. We know from the example of California's energy commission that huge financial savings can be generated through efficiency standards consistent with best available technology. Billions of dollars and large quantities of fossil fuel could be saved if the federal government would set tough but practical standards for lighting, refrigerators, stoves, computers and other products and pieces of equipment.

Congress provided the legal authority to do so in the 2007 energy bill, but the Department of Energy currently lacks the trained personnel and engineers needed to create such a sophisticated regulatory framework. This will require additional funding -- perhaps as much as several hundred million a year. The next president should engage the appliance and equipment manufacturers and provide the kind of leadership that has so far been totally lacking.

Next, the federal government should establish a financial grant program, encouraging the states to craft efficiency standards for new buildings. Again, the example of California is instructive. Its detailed and regional building standards have saved Californians tens of billions of dollars in lower energy bills. A significant part of the proposed \$10 billion could be spent on this type of effort. Each state would be asked to craft their own rules in response to the differing conditions found in various regions of the country.

A third type of program could be modeled on California's current system of rebates, tax credits and other incentives that encourage businesses and consumers to adopt efficiency measures that exceed the mandatory standards. This program is financed through the investor-owned utilities and established under the authority of the state utilities commission.

The federal government could provide a matching program for each state's efforts consistent with standards that are technically feasible, and that provide an economic return on the investment. In California, all the electric and gas utilities have added conservation investments to their historic practice of dealing with energy shortages only through building new plants.

Just as new sources of energy require vast sums spent on R&D, so do new efficiency technologies. They will emerge only if there is adequate investment in research and development. Some of the \$10 billion should go for this. Needless to say, overall investment in both energy and efficiency R&D is pathetically and dangerously underfunded.

While military, medical and pharmaceutical research has steadily grown over the past two decades, R&D to increase our national energy efficiency and provide the full gamut of new fuels and power sources has fallen by 50% in real terms. In the early 1980s, energy companies invested more in R&D than drug companies; today, drug companies invest 10 times as much in R&D as do energy firms. To secure our energy and economic future, America must reverse this shameful neglect. Physicist and University of California professor Dan Kammen estimates that we must increase our level of energy and energy efficiency R&D five to tenfold, spending \$15 billion to \$30 billion per year to develop new fuels, new sources of energy and more efficient technologies.

America is at a crossroads. Total U.S. financial and nonfinancial debt rose to \$44.7 trillion in 2006, from \$2.4 trillion in 1974. This does not even count longer-term liabilities such as Social Security and Medicare. Oil and gas are consuming more and more of our national wealth. It is time for our political and business leaders to tap into America's unspent creativity and entrepreneurial genius. Many times \$10 billion will be needed. But it can be done. It must be done.

Mr. Brown, a Democrat, is attorney general of California.