



Presidential Climate Action Project

Climate Action Brief:
The Good News about the U.S. Economy
August 6, 2008

Something good is happening in the U.S. economy. With all the bad news recently, we may not have noticed: We are seeing the first signs of America's shift to a new economy that will make us safer and more prosperous for generations to come.

The shift is both necessary and beneficial because the 21st century is presenting us with an array of new challenges, including skyrocketing oil prices; the massive transfer of American wealth to oil producing countries, some of which support terrorist organizations; a struggling auto industry; increasing global competition for finite resources; the out-migration of American jobs; and the urgent worldwide need to reduce greenhouse-gas emissions.

As we are painfully discovering, the old economy doesn't get the job done any more.

Enter the 21st Century Economy. It will be characterized by innovation, environmental stewardship and resource efficiency. Once it is fully underway, it will be powered by carbon-free energy resources produced here in the United States. It will create millions of new jobs that cannot be exported overseas and will reduce the hemorrhaging of dollars out of household budgets, American businesses and the national economy.

We will have cleaner air and water; better health; greener cities; state-of-the-art infrastructure; comfortable and healthy buildings that produce at least as much energy as they consume; more disposable income; new markets and business opportunities; stable and affordable energy prices; ultra-efficient vehicles and appliances; high-speed rail to move us conveniently between cities; and vibrant farms and rural communities that produce most of our energy and provide most of our carbon sequestration services.

Achieving the new economy will not be easy, but it will be far easier, far less expensive and far richer in opportunity than struggling in vain to continue business as usual.

Early Signs of a New Economy

How do we know that a 21st century economy is emerging? Here are a few of the early signs:

- The rising price of oil combined with an international commitment to cut greenhouse-gas emissions is making life difficult for commuters and for energy-intensive businesses. But it also is creating an enormous global market for clean fuels, energy efficiency technologies, highly efficient appliances and equipment, low-carbon building designs and materials, and renewable power production. “Those who recognize this opportunity will be first to the future and the billionaires of tomorrow,” says Hunter Lovins of Natural Capitalism Solutions.

The race already has begun. In October 2006, the Wall Street Journal reported that Shi Zhengrong of China, founder of Suntech Power Holdings Company, had become the world’s first “solar billionaire.” Others now include Frank Asbeck, founder of Germany’s SolarWorld and Xiao Peng, head of LDK Solar in China.

- While solar and wind energy provide only a fraction of the world’s energy today, they are the fastest growing forms of electric power. The United Nations reports “a gold rush of new investment into renewable power.” Capital investments in wind energy, solar energy and biofuels grew 43 percent from 2006 to 2007, the U.N. says. In many developing economies where electric infrastructure does not exist, renewable energy technologies are the cheapest – and sometimes the only – way to provide electricity to the billions of people who don’t have it.
- McKinsey & Company, the respected global consulting firm, predicts that over the next three to seven years, the unsubsidized cost of solar energy will compete with conventional electricity in California and the Southwestern United States. The company projects that solar electricity will cost as little as 10 cents a kilowatt hour by 2020, down from 36 cents today.
- While consumers have tolerated roller-coaster oil prices in the past, the price has reached the point where Americans are changing their behavior. Mass transit ridership and purchases of fuel-efficient vehicles are up; vehicle miles traveled and purchases of SUVs are down. Similar trends have come and gone in the past, but economists predict that the days of cheap gasoline are gone forever.
- Oil tycoon T. Boone Pickens is buying \$58 million in TV time to tell America that we can’t “drill our way out” of the energy crisis. Pickens has launched a national campaign to reduce the nation’s dependence on foreign oil by a third using solar and wind energy.¹ Pickens is not the only oilman to cross over to renewable energy. Denver billionaire Philip Anschutz is developing a 2,000-megawatt wind project in Wyoming and has acquired rights to build a \$3 billion, 900-mile transmission project that will move wind-generated power to southern California, Las Vegas and Phoenix.
- Pickens’ home state of Texas has approved the nation’s largest investment yet in renewable energy – an expenditure of \$4.9 billion to extend its electric grid to stranded wind resources.

¹ <http://www.pickensplan.com/theplan/>

- The demand for hybrid and fuel-efficient cars has increased so rapidly that General Motors is in a race with Toyota to produce market-ready next-generation electric vehicles by the end of this decade. Ford has announced it's converting two of its manufacturing plants from trucks – previously its best-seller -- to the production of more fuel-efficient cars.
- Farmers, ranchers and communities in rural America are discovering that the wind is a lucrative cash crop. Farmers are leasing sites for wind turbines at around \$5,000 per turbine. Wind power is providing new income for states and localities, too. A recent study by GE Energy Financial Services estimates that wind projects capable of generating 5,000 megawatts of electricity went on line last year. The plants also are generating money: \$6 million annually in local property taxes, \$15 million annually in state income taxes and a net present-value benefit to the U.S. Treasury of \$250 million.
- Renewable energy is creating jobs in the U.S. economy. GE Energy Financial Services reports that wind farms created 17,000 construction-related jobs and 1,600 long-term jobs last year. The Danish wind company, Vestas, attracted by Gov. Bill Ritter's plan to create a "new energy economy" in Colorado, is investing \$350 million in two manufacturing plants in rural areas of the state to produce turbine blades and towers. The plants will employ 1,000 people. Wind power has created 1,000 new jobs in Nolan County, Texas, and is expected to produce \$315 million in revenues.
- States are proving that enlightened public policy can generate surprisingly rapid growth in low-carbon energy technologies. After Colorado's citizens voted in 2004 to institute a 10-year renewable energy portfolio standard, solar and wind power grew so fast that the legislature doubled the standard three years later. After legislators in Texas approved a renewable energy portfolio standard in 1999, the state met its 10-year goal in only six years. Today, Texas is the nation's largest producer of wind electricity.
- Several of the nation's most respected leaders in building design, including the American Institute of Architects and the U.S. Green Building Council, have set the goal of making all new homes and commercial buildings carbon- and energy-neutral by 2030.
- More than 850 U.S. mayors have pledged to reduce their communities' greenhouse gas emissions at least to the levels established in the Kyoto Protocol. More than half of the 50 states have developed or are developing climate action plans, and more than 550 college and university presidents have pledged to make their campuses carbon-neutral.

Investing in the Future

The transition to the 21st century economy won't be cheap. It will require massive new investments, both public and private. Today, America is investing only 2.4 percent of its gross domestic product in infrastructure, half of Europe's investment rate and only a third of China's. The American Society of Civil Engineers has estimated that \$1.6 trillion is needed to repair existing infrastructure. A national commission estimates that the U.S. government should invest at least \$225 billion each year for the next 50 years to modernize our transportation systems. The U.S. Environmental Protection Agency estimates that the nation

needs to spend \$11 billion more each year over the next 20 years to fix our water systems. The U.S. Department of Energy figures it would cost at least \$43 billion to obtain 20 percent of the nation's projected electric demand from wind power by 2030,² a goal that DOE believes is technically possible.

But these are investments American cannot afford to avoid. Our national objective should be to channel public and private capital to the technologies that will unleash the new economy. Without forward-looking investment, the United States will have runaway carbon emissions and the infrastructure of a third-world country, threatening public safety and stunting our economic growth. Flight delays are costing at least \$15 billion each year; traffic congestion costs \$78 billion annually. Inefficient buildings are causing an estimated \$58 billion annually in worker sick-time. Extreme weather events – predicted to become more frequent because of climate change – caused losses of about \$50 billion worldwide in the first half of this year. Damage from this spring's flooding along the Mississippi River is expected to cost \$10 billion.

On the other hand, a campaign to rebuild America's infrastructure would create 47,500 jobs for every \$1 billion invested³ while providing the opportunity to make our roads, bridges, electric grid and waterworks more resilient against the predicted impacts of climate change. The best-available green building technologies could increase labor productivity by \$200 billion each year. In addition, by emphasizing the use of low-carbon and environmentally friendly materials, a rebuild America effort would create new markets for the green products that will support the 21st century economy.

The Time is Now

Rajendra Pachauri, chairman of the Intergovernmental Panel on Climate Change, estimates the world has only seven years to stabilize its greenhouse-gas emissions. The transition from one energy economy to another traditionally has taken a half-century. Moving with such speed will require a national focus unlike any we have seen since President Franklin D. Roosevelt mobilized the nation's industries to retool and manufacture the weapons we needed to win World War II. At the end of that war, America's economy had emerged from a depression and was stronger than ever.

In the same way, America will be stronger than ever after we rally to build the 21st century economy.

But we must begin now. The promising early signs of economic renewal must grow into a national mission. Each year we postpone the transition, the window of opportunity closes farther as American competitiveness declines, the costs of climate change and fossil energy dependence grow and other nations capture the huge global market for clean technologies.

² <http://www1.eere.energy.gov/windandhydro/pdfs/41869.pdf>

³ "The Cracks are Showing," *The Economist*, June 28, 2008, p. 36

Bold Leaders, Bold Policies

While intelligent investments at all levels of the economy are important, bold leadership by the next president and Congress will be crucial. For example:

- National legislation to create a fair, transparent and effective price on carbon will help the market work its magic in creating the new economy.
- Federal grant, loan and loan guarantee programs can be retargeted and public subsidies for fossil energy redirected to speed the development of low-carbon buildings, vehicles, communities and energy systems. One big opportunity will come before Congress next year when it considers how the nation will invest \$400 billion in transportation over the following six years. Congress must decide whether our highest priority is investments that lead to more gasoline consumption or investments that help localities create more efficient forms of mobility – for example, mass transit systems and high-speed rail for intercity travel.
- A new federal Empowerment Zone program could provide special development assistance to communities and neighborhoods hit hardest by climate change, climate policies and the transition from carbon intensive energy resources.
- Federal policies can be better designed to spur innovation – for example, by nurturing small businesses, America’s principal source of job growth and new patents. According to the U.S. Small Business Administration, small enterprises have generated most of the new jobs over the past decade and produce 13 times more patents per employee than larger patenting firms. As we have seen time and again in recent years, the Next Big Things may be invented by a small company or by an entrepreneur in a dorm room or garage.
- With more than 500,000 buildings, 600,000 vehicles and \$18 billion in energy expenditures each year, the federal government can create a sizeable sustained market for green energy and products, spurring industries to invest in plant and equipment. State and local procurement can help, too.
- Now that the nation’s intelligence community has declared climate change to be a serious national security issue, the goods and services that reduce America’s oil dependence and cut its greenhouse-gas emissions can be given as high a priority in federal funding as conventional defense expenditures.
- To liberate capital, the President and Congress can propose that other oil-importing nations help pay for policing Persian Gulf shipping lanes and that Iraq use its oil revenues (projected to be more than \$70 billion this year⁴) to pay for its reconstruction.

⁴ “Is It Turning the Corner?”, *The Economist*, June 14, 2008, p. 32.

In a recent report, the McKinsey Global Institute concluded that to achieve necessary reductions in carbon emissions while maintaining economic growth, the world needs a “carbon revolution” comparable to the transformation that took place in the Industrial Revolution – but in one-third the time.⁵ The costs are manageable and we have the technologies we need, the Institute said.

We also have the talent. The Brookings Institution confirms that America is still the world’s innovation leader, producing far more patents, employing more Nobel Laureates and boasting more top universities than any other nation. The federal government alone has more than 700 research facilities and more than 100,000 scientists and engineers. A growing number of U.S. businesses, including some of the nation’s largest corporations, are moving ahead with climate action.

This is a time that merits superlatives. It is a moment of extraordinary opportunity, arguably the greatest challenge yet for America’s genius and entrepreneurial spirit. It tests our character and our commitment to the nation’s future.

To pass the test and capture the opportunity, we must meet the job of economic transformation head-on. We need new policies and institutions, smart investments and a national commitment for change. And we need elected leaders who are willing to help the nation step boldly into this new century.

Editor’s Note: This Climate Action Brief is an outgrowth of a gathering of nearly 40 national climate leaders held by the Presidential Climate Action Project at the Johnson Foundation’s Wingspread Conference Center July 14-16. Participants agreed that the climate action community should give much more attention to the need for a positive and dynamic transformation of the U.S. economy, and to the fact that signs of that transformation already are emerging.

This brief was prepared by the nonpartisan Presidential Climate Action Project at the University of Colorado Denver. PCAP, which is developing a 100-day climate action plan for the next President of the United States, issues briefs from time to time for the use of the presidential candidates as they consider policies to deal with climate change. Details are available at www.climateactionproject.com. Additional briefs can be found at http://www.climateactionproject.com/climate_briefs.php.

⁵ http://www.mckinsey.com/mgi/publications/Carbon_Productivity/index.asp