

Friday, September 18, 2009

Achieving climate prosperity

Richard N. Swett

The debate over climate change has spent too much time describing the problem and debating its causes. Too little time has been spent on distributing solutions. It is possible to substantially reduce the global carbon footprint by profit-driven companies.

The press recently reported that by painting roofs white in the United States we could save 6.23 million metric tons of CO₂ emissions annually -- equivalent to taking 1.2 million cars off the road. We actually have the ability to make energy savings that reduce CO₂ emissions by 13 percent nationally using new building software technology, which equals taking all the cars and trucks off America's roads. Those savings will also dramatically reduce America's dependence on foreign oil in only a few years.

Further, in developing countries, building software and solar technology have the potential to eliminate poverty by creating sustainable economies while housing 2.6 billion people in a decade.

Both of these goals can be achieved with no new taxes or government spending here or abroad. What we need is leadership for climate prosperity in the global private sectors. This leadership will come by combining cost-reducing efficient use of energy with a focus on doing what's right for the environment.

America's human-built habitat consumes 40 percent of our annual energy use. Energy-smart virtualization of building design -- the way Boeing Co. and Lockheed Martin Corp. build jet planes -- allows the architect to build, test and use the building in simulations prior to construction. As the new Bank of America building in Manhattan demonstrates by its Leadership in Energy and Environmental Design Platinum certification, energy use can be reduced by over 50 percent and construction costs can be reduced by 15 percent.

For existing structures, virtualization analysis can reduce energy costs by 35 percent, which is why companies like Wal-Mart are installing white roofs. In three years, the energy savings pay for the renovations, which is a business no-brainer.

Cars and trucks now use 12 percent of energy in the United States. Changing car fuel behaviors is a worthy but complicated and time-consuming affair and can have economically damaging effects on the automobile industry. Conversely, changing the fuel use of buildings for owners who stand to profit significantly is a straightforward and immediate business proposition, without the damaging consequences to employment (especially during a recession). America should move aggressively and fast on this front to reduce its energy consumption, costs, carbon

footprint, and most important, to positively impact unemployment. Climate prosperity is common sense.

Consider now the 2.6 billion people globally that have no access to electricity, live in city slums, are extremely poor, and 1.3 billion of whom are hungry, according to the United Nations. We could change all that in one decade with a little help from the sun.

Imagine families of six living under a 600-square-foot solar roof house. That's 433 million roofs, each of which could produce 1,000 kilowatt hours (kWh) per month. The family living in the house needs only 200 kWh per month for their basic requirements. Every roof has the potential to produce a surplus of 800 kWh per month.

By selling each roof's surplus kilowatt hours at the market rate, each family could buy their house with a 20-year mortgage based upon a power purchasing agreement with their local utility and still have extra income to invest in their sustainable economy. This is a climate prosperity business proposition for the rich and poor nations on Earth.

The surplus 346 trillion kWh per month produced by those 433 million roofs, combined with appropriate services like education and health care from nongovernmental organizations, would transform poor nations into productive economic engines for climate prosperity with no carbon footprint. The effect on the Earth's climate, forests and water would be dramatic, as would be the reduction in wars and genocides driven by scarcity. As the 2.6 billion under those roofs improved their standard of living, global aid to the poor could be redirected from emergencies due to disease and starvation to long-term solutions such as job training.

Key national government leaders and private sector investment executives will gather in Copenhagen in December to discuss a Global Climate Prosperity Agreement. The agreement could provide adequate financing for projects like transformative solar roof power plants for developing nations. America should lead the fight in Copenhagen for climate prosperity that can empower 2.6 billion poor people worldwide to become sustainably productive and prosperous. Climate prosperity may even entice China and India to participate in the December agreement discussions.

We have been living with "climate change" for centuries. However, the addition of carbon into the atmosphere from industrialized countries and the explosion in global poverty are two converging problems that, left unattended, could destroy civilization as we know it today. Climate prosperity can be achieved in only one generation with just a little help from our sun, while no additional help is needed from the world's taxpayers. Climate prosperity is a business proposition for everyone on Earth.

Richard N. Swett, an architect, is a former Democratic member of the U.S. House of Representatives from New Hampshire and a former U.S. ambassador to Denmark. He is co-founder of Climate Prosperity Enterprise Solutions LLC and the author of "Leadership by Design: Creating an Architecture of Trust".