

The Coming Climate Crash

Lessons for Climate Change in the 2008 Recession

By HENRY M. PAULSON Jr. JUNE 21, 2014, New York Times



Carbon dioxide emissions like those from coal-fired power plants should be taxed to spur energy innovation. Credit Luke Sharrett for The New York Times

THERE is a time for weighing evidence and a time for acting. And if there's one thing I've learned throughout my work in finance, government and conservation, it is to act before problems become too big to manage.

For too many years, we failed to rein in the excesses building up in the nation's financial markets. When the credit bubble burst in 2008, the damage was devastating. Millions suffered. Many still do.

We're making the same mistake today with [climate change](#). We're staring down a climate bubble that poses enormous risks to both our environment *and* economy. The warning signs are clear and growing more urgent as the risks go unchecked.

This is a crisis we can't afford to ignore. I feel as if I'm watching as we fly in slow motion on a collision course toward a giant mountain. We can see the crash coming, and yet we're sitting on our hands rather than altering course.

We need to act now, even though there is much disagreement, including from members of my own Republican Party, on how to address this issue while remaining economically competitive. They're right to consider the economic implications. But we must not lose sight of the profound economic risks of doing nothing.

The solution can be a fundamentally conservative one that will empower the marketplace to find the most efficient response. We can do this by putting a price on emissions of carbon dioxide — a carbon tax. Few in the United States now pay to emit this potent greenhouse gas into the atmosphere we all share. Putting a price on emissions will create incentives to develop new, cleaner energy technologies.

It's true that the United States can't solve this problem alone. But we're not going to be able to persuade other big carbon polluters to take the urgent action that's needed if we're not doing everything we can do to slow our carbon emissions and mitigate our risks.

I was secretary of the Treasury when the credit bubble burst, so I think it's fair to say that I know a little bit about risk, assessing outcomes and problem-solving. Looking back at the dark days of the financial crisis in 2008, it is easy to see the similarities between the financial crisis and the climate challenge we now face.

We are building up excesses (debt in 2008, greenhouse gas emissions that are trapping heat now). Our government policies are flawed (incentivizing us to borrow too much to finance homes then, and encouraging the overuse of carbon-based fuels now). Our experts (financial experts then, climate scientists now) try to understand what they see and to model possible futures. And the outsize risks have the potential to be tremendously damaging (to a globalized economy then, and the global climate now).

Back then, we narrowly avoided an economic catastrophe at the last minute by rescuing a collapsing financial system through government action. But climate change is a more intractable problem. The carbon dioxide we're sending into the atmosphere remains there for centuries, heating up the planet.

That means the decisions we're making today — to continue along a path that's almost entirely carbon-dependent — are locking us in for long-term consequences that we will not be able to change but only adapt to, at enormous cost. To protect New York City from rising seas and storm surges is expected to cost at least \$20 billion initially, and eventually far more. And that's just one coastal city.

New York can reasonably predict those obvious risks. When I worry about risks, I worry about the biggest ones, particularly those that are difficult to predict — the ones I call small but deep holes. While odds are you will avoid them, if you do fall in one, it's a long way down and nearly impossible to claw your way out.

Scientists have identified a number of these holes — potential thresholds that, once crossed, could cause sweeping, irreversible changes. They don't know exactly when we would reach them. But they know we should do everything we can to avoid them.

Already, observations are catching up with years of scientific models, and the trends are not in our favor.

Fewer than 10 years ago, the best analysis projected that melting Arctic sea ice would mean nearly ice-free summers by the end of the 21st century. Now the ice is melting so rapidly that virtually ice-free Arctic summers could be here in the next decade or two. The lack of reflective ice will mean that more of the sun's heat will be absorbed by the oceans, accelerating warming of both the oceans and the atmosphere, and ultimately raising sea levels.

Even worse, in May, [two separate studies](#) discovered that one of the biggest thresholds has already been reached. The West Antarctic ice sheet has begun to melt, a process that scientists estimate may take centuries but that could eventually raise sea levels by as much as 14 feet. Now that this process has begun, there is nothing we can do to undo the underlying dynamics, which scientists say are "baked in." And 10 years from now, will other thresholds be crossed that scientists are only now contemplating?

It is true that there is uncertainty about the timing and magnitude of these risks and many others. But those who claim the science is unsettled or action is too costly are simply trying to ignore the problem. We must see the bigger picture.

The nature of a crisis is its unpredictability. And as we all witnessed during the financial crisis, a chain reaction of cascading failures ensued from one intertwined part of the system to the next. It's easy to see a single part in motion. It's not so easy to calculate the resulting domino effect. That sort of contagion nearly took down the global financial system.

With that experience indelibly affecting my perspective, viewing climate change in terms of risk assessment and risk management makes clear to me that taking a cautiously conservative stance — that is, waiting for more information before acting — is actually taking a very radical risk. We'll never know enough to resolve all of the uncertainties. But we know enough to recognize that we must act now.

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I'm a businessman, not a climatologist. But I've spent a considerable amount of time with climate scientists and economists who have devoted their careers to this issue. There is virtually no debate among them that the planet is warming and that the burning of fossil fuels is largely responsible.

Farseeing business leaders are already involved in this issue. It's time for more to weigh in. To add reliable financial data to the science, I've joined with the former mayor of New York City, Michael R. Bloomberg, and the retired hedge fund manager Tom Steyer on an economic analysis of the costs of inaction across key regions and economic sectors. Our goal for the Risky Business project — starting with a new study that will be released this week — is to influence business and investor decision making worldwide.

We need to craft national policy that uses market forces to provide incentives for the technological advances required to address climate change. As I've said, we can do this by placing a tax on carbon dioxide emissions. Many respected economists, of all ideological persuasions, support this approach. We can debate the appropriate pricing and policy design and how to use the money generated. But a price on carbon would change the behavior of both individuals and businesses. At the same time, all fossil fuel — and renewable energy — subsidies should be phased out. Renewable energy can outcompete dirty fuels once pollution costs are accounted for.

Some members of my political party worry that pricing carbon is a “big government” intervention. In fact, it will reduce the role of government, which, on our present course, increasingly will be called on to help communities and regions affected by climate-related disasters like floods, drought-related crop failures and extreme weather like tornadoes, hurricanes and other violent storms. We'll all be paying those costs. Not once, but many times over.

This is already happening, with taxpayer dollars rebuilding homes damaged by [Hurricane Sandy](#) and the deadly Oklahoma tornadoes. This is a proper role of government. But our failure to act on the underlying problem is deeply misguided, financially and logically.

In a future with more severe storms, deeper droughts, longer fire seasons and rising seas that imperil coastal cities, public funding to pay for adaptations and disaster relief will add significantly to our fiscal deficit and threaten our long-term economic security. So it is perverse that those who want

limited government and rail against bailouts would put the economy at risk by ignoring climate change.

This is short-termism. There is a tendency, particularly in government and politics, to avoid focusing on difficult problems until they balloon into crisis. We would be fools to wait for that to happen to our climate.

When you run a company, you want to hand it off in better shape than you found it. In the same way, just as we shouldn't leave our children or grandchildren with mountains of national debt and unsustainable entitlement programs, we shouldn't leave them with the economic and environmental costs of climate change. Republicans must not shrink from this issue. Risk management is a conservative principle, as is preserving our natural environment for future generations. We are, after all, the party of Teddy Roosevelt.

THIS problem can't be solved without strong leadership from the developing world. The key is cooperation between the United States and China — the two biggest economies, the two biggest emitters of carbon dioxide and the two biggest consumers of energy.

When it comes to developing new technologies, no country can innovate like America. And no country can test new technologies and roll them out at scale quicker than China.

The two nations must come together on climate. The Paulson Institute at the University of Chicago, a "think-and-do tank" I founded to help strengthen the economic and environmental relationship between these two countries, is focused on bridging this gap.

We already have a head start on the technologies we need. The costs of the policies necessary to make the transition to an economy powered by clean energy are real, but modest relative to the risks.

A tax on carbon emissions will unleash a wave of innovation to develop technologies, lower the costs of clean energy and create jobs as we and other nations develop new energy products and infrastructure. This would strengthen national security by reducing the world's dependence on governments like Russia and Iran.

Climate change is the challenge of our time. Each of us must recognize that the risks are personal. We've seen and felt the costs of underestimating the financial bubble. Let's not ignore the climate bubble.

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