

Two Paths for the Planet

Will we rewire the world with clean energy—or descend into political chaos, social disruption, and climate hell? And will Washington get with the program?

BY ROSS GELBSPAN

HUMANITY IS STANDING AT A CROSSROADS BETWEEN a more just, peaceful world and an increasingly chaotic, turbulent, and authoritarian future driven by a succession of climate-driven emergencies. We could find ourselves struggling to survive a desolate era of climate hell marked not only by a degraded and fractured society but also by more authoritarian governments.

But the good news is that the bad news is at last being taken seriously. With the latest report of the Intergovernmental Panel on Climate Change synthesizing the work of some 2,500 scientists, there are no longer serious deniers. An alternative path could lead not just to a pullback from climate disaster, but to a more peaceful and cooperative world. Why? Because the private, corporate forces that have produced the climate emergency are powerless to cure it. As even many in the private sector now admit, the necessary solutions will require new feats of cooperation among governments, new collaborative regulation of energy and the environment, as well as new social investments in renewable technology and a global system to distribute them.

The challenge has been taken very seriously in Europe—where leaders want much stricter goals for the next phase of the Kyoto Protocol beginning in 2012. In May, German Chancellor Angela Merkel sought agreement by industrial nations to cut emissions 50 percent by 2050 at the June G-8 summit. But U.S. negotiators accused the Chancellor of ignoring their concerns. Prior to the summit, Bush seemed to undermine the G-8 by calling on the U.S., India, China, Mexico and Australia, and 10 other major polluters to craft a new carbon-cutting framework by 2008. James Connaughton, senior U.S. climate advisor, kicked off the summit by declaring the United States would not accept the EU goals. In the end, the U.S. agreed only “to seriously consider” the non-binding vows by the EU, Japan, and Canada to halve emissions by 2050. Bush’s plan for the 15 large polluters could allow his successor to work more closely with the EU on the next phase of Kyoto. But, despite bravely optimistic words by Merkel and Tony Blair, Bush did in fact cripple the EU push to substantially slow the pace of climate change. His

promise to “seriously consider” greater future cuts fell far short of the commitments the EU had wanted.

Ultimately, the challenge is as simple as it is overwhelming: Humanity must cut its use of coal and oil worldwide by about 80 percent in a very short time by shifting to clean energy. The predominant view of that gargantuan challenge casts it as mainly technical: that energy systems will remain centralized; that private market forces will make that energy transition; and that our current form of social and economic organization will remain fundamentally unchanged.

But that picture has it backwards. The technical remedies favored by the big energy companies are mostly the wrong ones, such as “clean coal” and mechanical carbon sequestration. Their purpose is often to serve the interests of big oil and big coal, not to produce the most efficient or cleanest technologies, much less socially effective applications of their use.

What’s required is significant government action, and on a global scale. In that respect, the carbon crisis could be a profoundly transformative opportunity to begin to reverse the growing and unsustainable gap between the world’s rich and poor, to rescue the democratic process from the growing reality of corporate domination, and to launch a coordinated global transition that could fundamentally alter historical power relationships.

OUTSIDE THE UNITED STATES, THE TRANSITION IS BEGINNING IN earnest. The Netherlands, Germany, France, and the U.K. have already vowed to cut their carbon emissions by 50 to 80 percent over the next 45 years. The EU has just agreed in principle to cut carbon levels 20 percent below 1990 levels by 2020.

European cities, regions, nations, and the EU are also leading the world in developing more energy-efficient systems of transportation and construction, and in helping private industry develop new forms of renewable energy technology. This effort did not occur spontaneously because the oil companies or public utilities or private developers saw the light, or because market forces saw profit opportunities. Europe’s renewable energy path happened as a result of careful public policies, informed by public planning, including taxes on carbon energy use, subsidies for

development and use of clean energy, regulations on building standards and public utility purchases, and leadership on the Kyoto Protocol process.

Europe's new willingness to press Washington harder on this issue did not begin with this year's G-8 meeting. In fact, several governments contemplated legal action against the United States as early as the summer of 2001. At that time, representatives of the French, Swiss, and Canadian governments said in background conversations with me that they were planning to bring the United States to court under the World Trade Organization. Their argument was that the WTO prohibits governments from subsidizing their products. And if their countries were drawing down their emissions according to the Kyoto schedule and the United States was not, they were planning to petition the WTO to level stiff taxes on American exports on the ground that the United States was "carbon-subsidizing" its exports. That initiative was aborted, months later, by the terrorist attacks on the World Trade Center and the Pentagon. But it resurfaced last November when then-French Prime Minister Dominique de Villepin proposed taxes on imports from countries that refused to sign the Kyoto Protocol.

The United States, as the world's most disproportionate energy consumer, is in a position either to lead an energy transition, or to thwart it. A pro-active U.S. role has been blocked by both the Bush administration and big oil and coal. Beginning in the early 1990s, the coal industry mounted an extensive campaign of deception and disinformation, covertly paying a tiny handful of "greenhouse skeptics" several million dollars and buying them a great deal of air time to persuade the public and policy-makers that climate change was either nonexistent, negligible, or due to natural causes.

As recently as October 2006, President Bush tapped Lee Raymond, the recently retired chief executive of ExxonMobil, to help chart America's energy future. Despite Bush's belated admission in his 2007 State of the Union address that climate change is real, Bush's policies are essentially unchanged and the White House has become the East Coast branch office of ExxonMobil and Peabody coal. The Democrats are only marginally better. Climate change has become the preeminent case study of the contamination of our political system by money.

EVEN BEFORE BUSH LEAVES OFFICE, THAT POLITICAL paralysis may now be changing, as growing segments of the business and finance communities are beginning to sense the enormous losses that will result from an increasingly inflamed climate.

One hopeful fact is that the oil industry is far from monolithic. While ExxonMobil, for example, has poured millions into disinformation about the true state of climate change, BP has re-branded itself as "Beyond Petroleum" and Shell has spent \$1 billion on developing clean energy subsidiaries.

BP Solar created the country's largest fully integrated solar

power plant in Maryland and recently the company committed an additional \$70 million to expand the facility. Two years ago the chairman of Shell, Ron Oxburgh, shocked the industry when he acknowledged that the threat of climate change makes him "really very worried for the planet." In early March 2007, both Shell and BP announced major investments in wind energy in the United States.

But privately many oil company chiefs say they are torn between the realities of an increasingly turbulent climate and the competitive dynamics of their own industry. In background discussions with me several years ago, the top executives of six major oil companies all acknowledged the dangers of climate change. None denied the kind of massive and abrupt changes we may soon be encountering (although few were willing to acknowledge the likelihood of what scientists label a "worst-case scenario").

To a person, each of these top oil executives said essentially the same thing. They are aware of the problem, but they are unable to act unilaterally. One executive summed it up by saying: "If I

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put lots of money into solar, my company will be undercut by ExxonMobil. My company will lose market share. Its stock price will drop. And I'll be out of a job." (Because all these conversations were conducted on an off-the-record basis, the executives insisted on anonymity both for themselves and their companies.)

The only way out of this impasse, according to these executives, was summed up by one oil company CEO: "We need the governments of the world to regulate us so we can all make the transition [to clean energy] in lockstep. If we are all regulated to make these changes simultaneously, we can do it without any one company losing market share to the competition."

Predictably, these executives refused to go on the record in their support for binding rules. As one executive winked at the end of an interview, "If you ask me to go public on the need for government regulation, I'll swear this conversation never happened and that I never saw you before in my life." One exception, Lord Browne, the CEO of BP, candidly admitted in his recent piece in *Foreign Affairs*: "The business sector cannot succeed in isolation. Harnessing business potential requires fair and credible incentives to drive the process of innovation and change. In responding to global warming, that role must fall to the government ..."

Meanwhile, the insurance industry, which stands to lose the most among business groups, has become part of the coalition for radical change. One of the world's largest re-insurers, Swiss Re, has warned corporate clients it is prepared to withhold liability insurance from directors and officers of companies that do not reduce their carbon output.



In 2004 Swiss Re projected that within the decade, business losses from climate change will reach \$150 billion a year. In its report, the insurance giant noted, “There is a danger that human intervention will accelerate and intensify natural climate change to such a point that it will become impossible to adapt our socio-economic systems in time.” (Last year, a UN report upped the ante, saying that intensified climate change could cost the global economy \$1 trillion a year in losses over the next 35 years.) In contrast to the European insurers, the large American re-insurance companies are keeping silent politically and protecting themselves financially by refusing to insure large areas of coastal property, known storm corridors, and other areas that are especially vulnerable to climate impacts.

ANOTHER REASON TO BE OPTIMISTIC IS THAT A GLOBAL ENERGY transition would dramatically expand markets in the developing world (assuming the pace of climate change does not escalate out of control). Virtually all developing countries would love to go solar—if for no other reason than to improve the health and productivity of their citizens.

The most air-polluted cities in the world today are in China, Thailand (Bangkok), Chile (Santiago), Mexico, and a host of other third-world countries. A number of writers—Mark Hertsgaard (author of *Earth Odyssey*), John Pomfret (*Chinese Lessons*), and Jonathan Kaufman, former Beijing bureau chief of the *Wall Street Journal*, among others—have detailed ways in which monstrous levels of pollution are threatening the Chinese economy. The obstacle to change is that countries like India and

China (with their huge coal deposits) and Mexico and Nigeria (with their extensive oil reserves) cannot afford a switch to non-carbon energy sources without economic help.

Energy investments in developing countries would expand the overall wealth of the global economy. Development economists generally agree that every dollar invested in energy in poor countries creates more jobs and more wealth than the same dollar invested in virtually any other sector of their economies. The availability of cheap solar, wind, or small-scale hydro power in interior regions of Asia, Africa, and Latin America would generate thousands of small businesses and spur the development of new indigenous industries. Most forms of renewable energy, moreover, involve only a one-time capital investment with minimal ongoing operational costs.

Were the industrial world to help finance a global energy transition, it would create millions of jobs, both in poor nations and developed ones. It would raise living standards in developing countries without compromising ours. It would begin to turn impoverished and dependent countries into trading partners. Ultimately, it would jump the renewable energy industry into a central, driving engine of growth for the global economy.

However, there is also a much darker scenario for the third world, and for the world generally. As with other economic calamities, this one hits the poor hardest. Without a radical energy transformation, third-world cities, already among the world’s most polluted, will become even more toxic. As climate change intensifies, the most immediate casualties will be poor countries whose crops are destroyed by weather extremes, whose coastal areas are inundated by rising sea levels, and whose borders will be overrun by environmental refugees (whose total today already exceeds all other types of refugees combined). Climate impacts will erode purchasing power and shrink markets most immediately in the developing world.

The present path of climate change also augurs badly for political democracy. Third-world countries tend to have more fragile democracies; and when governments are confronted by breakdowns, they turn to their police and military power to maintain order. Even durable democracies are at risk. New Orleans Mayor Ray Nagin is certainly no dictator. But when Hurricane Katrina and its torrential aftermath inundated his city, the mayor had no choice but to bring in the National Guard to enforce evacuation orders, clear escape routes, and try to limit the predictable outbreak of looting and lawlessness.

ULTIMATELY, IT FALLS ON THE SHOULDERS OF GOVERNMENTS TO launch a public-private, North-South, global public works program to rewire the world with clean energy. The key elements of one such recipe include:

- a change in energy subsidy policies in industrial countries;
- the creation of a large fund to transfer clean energy to poor countries; and
- a binding regulatory mechanism that requires every country to gradually increase its fossil fuel efficiency, say by 5 percent a year.

In 2006 the United States spent about \$45 billion subsidizing oil, natural gas, and coal via tax breaks, waived royalties, and

direct outlays. In the industrial world overall, carbon fuel subsidies exceed \$200 billion a year. If those subsidies were removed from fossil fuels and put behind renewables, carbon-based energy would become more expensive (more closely reflecting its true cost). The energy industry, both old and new companies, would follow the money and become aggressive developers of fuel cells, solar panels, and windmills. That subsidy shift would also bring out of the woodwork an army of energy engineers and entrepreneurs—with successively more efficient generations of solar film and turbines and tidal devices—in an explosion of creativity that would rival the dot-com revolution of the 1990s.

The industrial nations need to create a large fund, estimated by experts at about \$300 billion a year for about a decade, to jumpstart renewable energy infrastructures in poor countries. This could be funded by carbon taxes in the North. It could come from a tax on international airline travel. A very promising mechanism involves a tax on international currency transactions of the sort originally proposed by the Nobel laureate economist James Tobin. Today the commerce in those currency transactions exceeds \$1.5 trillion a day. A small tax of a quarter of a penny on a dollar would net out to about \$300 billion a year for wind farms in India, fuel-cell factories in South Africa, solar assemblies in El Salvador, and vast, solar-powered hydrogen farms in the deserts of the Middle East.

The signatories to Kyoto should adopt within the treaty's framework a binding, fossil fuel efficiency standard that rises by 5 percent per year. This is a mechanism that would make it all work. Under this plan, every country would start at its current baseline

to increase its fossil fuel energy efficiency by 5 percent every year until the global 70 percent reduction was attained. That means a country would produce the same amount as the previous year with 5 percent less carbon fuel. Or it would produce 5 percent more goods with the same carbon fuel use as the previous year. Since no economy grows at 5 percent for long, emissions reductions would outpace long-term economic growth.

The transition could actually happen much more rapidly once new technologies came online. For the first few years of this progressive efficiency standard, countries would meet their goals by wringing the waste out of their current energy systems. After a few years, as those efficiencies became more expensive to capture, countries would meet the 5 percent goal by drawing more and more energy from renewable sources—most of which are 100 percent efficient by a fossil fuel standard. That, in turn, would create the mass markets and economies of scale for renewables that would bring down their prices and make them price-competitive with coal and oil.

THERE HAS SELDOM BEEN A MORE STARK CHOICE BETWEEN TWO opposite paths. If we move decisively toward a global future based on clean energy, the degree of needed cooperation and common purpose could promote broader peace and social justice, even in today's profoundly fractured world. This kind of initiative could also temper the outbreak of increasingly toxic nationalism. Since it is no respecter of national boundaries, the global climate makes us one.

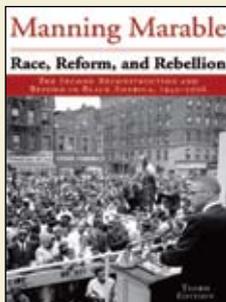
A growing number of the world's leading climate scientists agree that we are already too far along a catastrophic trajectory to avoid significant disruptions. The problem is compounded by the fact that carbon dioxide stays in the atmosphere for 100 years. So even if we stopped burning coal and oil tomorrow, we would still be facing a long spell of costly and traumatic disruptions.

An investment of \$300 billion is a lot of money, but the cost of continuing on the present path runs into the trillions. The real economic issue is whether the world will accomplish the energy transition in time to meet nature's deadline.

Looking at the transformative economic and political potential of a clean energy future, one can feel very optimistic. What injects a feeling of pessimism, however, is both the looming imminence of runaway climate change and the dismal lack of leadership by U.S. politicians of both parties. None of our political leaders—not George W. Bush, Hillary Clinton, Barack Obama, John McCain, Rudy Giuliani, Mitt Romney (not even Al Gore)—is willing to propose the kind of massive, urgent response that nature demands. What is needed—yesterday—is not a gradual, incremental energy transition but a revolution in our energy structure—an energy-based Manhattan Project that should have been accomplished at least ten years ago. The future of the world quite literally depends on whether U.S. leadership rises to the occasion. **TAP**

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