

# The Climate for Change

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THE inspiring and transformative choice by the American people to elect Barack Obama as our 44th president lays the foundation for another fateful choice that he — and we — must make this January to begin an emergency rescue of human civilization from the imminent and rapidly growing threat posed by the climate crisis.

The electrifying redemption of America's revolutionary declaration that all human beings are born equal sets the stage for the renewal of United States leadership in a world that desperately needs to protect its primary endowment: the integrity and livability of the planet.

The world authority on the climate crisis, the Intergovernmental Panel on Climate Change, after 20 years of detailed study and four unanimous reports, now says that the evidence is "unequivocal." To those who are still tempted to dismiss the increasingly urgent alarms from scientists around the world, ignore the melting of the north polar ice cap and all of the other apocalyptic warnings from the planet itself, and who roll their eyes at the very mention of this existential threat to the future of the human species, please wake up. Our children and grandchildren need you to hear and recognize the truth of our situation, before it is too late.

Here is the good news: the bold steps that are needed to solve the climate crisis are exactly the same steps that ought to be taken in order to solve the economic crisis and the energy security crisis.

Economists across the spectrum — including Martin Feldstein and Lawrence Summers — agree that large and rapid investments in a jobs-intensive infrastructure initiative is the best way to revive our economy in a quick and sustainable way. Many also agree that our economy will fall behind if we continue spending hundreds of billions of dollars on foreign oil every year. Moreover, national security

experts in both parties agree that we face a dangerous strategic vulnerability if the world suddenly loses access to Middle Eastern oil.

As Abraham Lincoln said during America's darkest hour, "The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new, so we must think anew, and act anew." In our present case, thinking anew requires discarding an outdated and fatally flawed definition of the problem we face.

Thirty-five years ago this past week, President Richard Nixon created Project Independence, which set a national goal that, within seven years, the United States would develop "the potential to meet our own energy needs without depending on any foreign energy sources." His statement came three weeks after the Arab oil embargo had sent prices skyrocketing and woke America to the dangers of dependence on foreign oil. And — not coincidentally — it came only three years after United States domestic oil production had peaked.

At the time, the United States imported less than a third of its oil from foreign countries. Yet today, after all six of the presidents succeeding Nixon repeated some version of his goal, our dependence has doubled from one-third to nearly two-thirds — and many feel that global oil production is at or near its peak.

Some still see this as a problem of domestic production. If we could only increase oil and coal production at home, they argue, then we wouldn't have to rely on imports from the Middle East. Some have come up with even dirtier and more expensive new ways to extract the same old fuels, like coal liquids, oil shale, tar sands and "clean coal" technology.

But in every case, the resources in question are much too expensive or polluting, or, in the case of "clean coal," too imaginary to make a difference in protecting either our national security or the global climate. Indeed, those who spend hundreds of millions promoting "clean coal" technology consistently omit the fact that there is little investment and not a single large-scale demonstration project in the

United States for capturing and safely burying all of this pollution. If the coal industry can make good on this promise, then I'm all for it. But until that day comes, we simply cannot any longer base the strategy for human survival on a cynical and self-interested illusion.

Here's what we can do — now: we can make an immediate and large strategic investment to put people to work replacing 19th-century energy technologies that depend on dangerous and expensive carbon-based fuels with 21st-century technologies that use fuel that is free forever: the sun, the wind and the natural heat of the earth.

What follows is a five-part plan to repower America with a commitment to producing 100 percent of our electricity from carbon-free sources within 10 years. It is a plan that would simultaneously move us toward solutions to the climate crisis and the economic crisis — and create millions of new jobs that cannot be outsourced.

First, the new president and the new Congress should offer large-scale investment in incentives for the construction of concentrated solar thermal plants in the Southwestern deserts, wind farms in the corridor stretching from Texas to the Dakotas and advanced plants in geothermal hot spots that could produce large amounts of electricity.

Second, we should begin the planning and construction of a unified national smart grid for the transport of renewable electricity from the rural places where it is mostly generated to the cities where it is mostly used. New high-voltage, low-loss underground lines can be designed with "smart" features that provide consumers with sophisticated information and easy-to-use tools for conserving electricity, eliminating inefficiency and reducing their energy bills. The cost of this modern grid — \$400 billion over 10 years — pales in comparison with the annual loss to American business of \$120 billion due to the cascading failures that are endemic to our current balkanized and antiquated electricity lines.

Third, we should help America's automobile industry (not only the Big Three but the innovative new startup companies as well) to

convert quickly to plug-in hybrids that can run on the renewable electricity that will be available as the rest of this plan matures. In combination with the unified grid, a nationwide fleet of plug-in hybrids would also help to solve the problem of electricity storage. Think about it: with this sort of grid, cars could be charged during off-peak energy-use hours; during peak hours, when fewer cars are on the road, they could contribute their electricity back into the national grid.

Fourth, we should embark on a nationwide effort to retrofit buildings with better insulation and energy-efficient windows and lighting. Approximately 40 percent of carbon dioxide emissions in the United States come from buildings — and stopping that pollution saves money for homeowners and businesses. This initiative should be coupled with the proposal in Congress to help Americans who are burdened by mortgages that exceed the value of their homes.

Fifth, the United States should lead the way by putting a price on carbon here at home, and by leading the world's efforts to replace the Kyoto treaty next year in Copenhagen with a more effective treaty that caps global carbon dioxide emissions and encourages nations to invest together in efficient ways to reduce global warming pollution quickly, including by sharply reducing deforestation.

Of course, the best way — indeed the only way — to secure a global agreement to safeguard our future is by re-establishing the United States as the country with the moral and political authority to lead the world toward a solution.

Looking ahead, I have great hope that we will have the courage to embrace the changes necessary to save our economy, our planet and ultimately ourselves.

In an earlier transformative era in American history, President John F. Kennedy challenged our nation to land a man on the moon within 10 years. Eight years and two months later, Neil Armstrong set foot on the lunar surface. The average age of the systems engineers

cheering on Apollo 11 from the Houston control room that day was 26, which means that their average age when President Kennedy announced the challenge was 18.

This year similarly saw the rise of young Americans, whose enthusiasm electrified Barack Obama's campaign. There is little doubt that this same group of energized youth will play an essential role in this project to secure our national future, once again turning seemingly impossible goals into inspiring success.

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