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Toward a Conservative Policy on Climate Change

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America's climate policy to date has been a failure, and a costly one. The way it is now unfolding it runs a large chance of incurring high costs, and only a very small chance of benefiting the American people. Environmentalists have failed to provide an effective response to the challenges posed by climate change. Instead they have focused on an expensive and ultimately futile strategy of unilateral greenhouse gas restrictions. Conservatives, meanwhile, rather than developing a constructive response to climate change have chosen largely to ignore it or to obfuscate climate science.

The United States needs a new vision of climate policy that deals soberly with both scientific and political realities. Although the environmental movement has arguably done the world a great service in popularizing scientific findings about climate change, its climate policy response is quixotic. Where innovation should be prized, it endorses the precautionary principle. Where careful weighing of outcomes and risks is called for, it scorns the use of cost-benefit analysis. Despite high uncertainty about how climate change will affect the United States, most environmental groups are trying to narrow our range of options to a strategy that amounts to stringent energy austerity. Faced with a problem that demands great suppleness, their main response is to engorge the administrative state.

The conservative and business groups that have borne the brunt of opposing these policies have probably saved the country large sums of money that would otherwise have been squandered on ill-advised abatement schemes. But, with some notable exceptions, they have badly muddled the scientific issues, and they may have harmed the conservative brand, losing well-informed voters who would otherwise be sympathetic to the right. By dogmatically asserting that no serious threat is on the horizon, too many conservatives have removed themselves from the debate about how to hedge our bets sensibly by finding ways of reducing the risks climate change poses while minimizing the economic impact.

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Because conservatives, for the most part, are less concerned about climate change than environmentalists are, it may seem that workable solutions are more likely to come from the left. That assumption is incorrect. If politicians and policy analysts on the right were to look more carefully at the problem, they would realize that conservatism offers much more tenable approaches—and they might just be able to stop running from the issue.

Where the Science Stands

Climate change—or global warming, as it was once more commonly known—is an extremely complex phenomenon influenced by both human activity and natural processes. Agriculture, the burning of fossil fuels, and many other human activities release "greenhouse gases"—so called because they absorb energy in a way that allows sunlight to warm the atmosphere. Carbon dioxide is the most important of the greenhouse gases influenced by human activity, but methane and a number of others are also important. Once these gases enter the atmosphere, natural processes withdraw them into various "sinks," such as the oceans, vegetation, and soil. But human activity is releasing these greenhouse gases into the atmosphere at higher rates than they're being drawn out through the natural cycles, so their concentrations in the atmosphere are rising—particularly that of carbon dioxide. Atmospheric carbon dioxide measured at the Mauna Lea observatory in Hawaii has increased from 315 parts per million in 1959 to 396 parts per million in 2013. Concentrations of carbon dioxide have not been that high during the entire history of human civilization, and perhaps even in the entire time that our species has walked the earth.

As greenhouse gas concentrations continue to rise, the average global temperature is expected to rise as well. As it does, it will affect the world's climate in myriad ways. Some of the changes will be harmful, others may be beneficial. At present, it is far from clear exactly what all those changes will be, where they will occur, or when we can expect them to take place, much less just who will benefit or suffer from them.

The 2013 report of the United Nations Intergovernmental Panel on Climate Change (IPCC) paints a mixed picture of the long-term risks. Based on the report's findings and predictions, it would seem that over the next several decades, or perhaps even for the remainder of this century, the United States will be able to adapt to climate change at tolerable costs, though those costs will rise over time. However, key strategic allies such

as India will be at greater risk. There is also a small but real chance that the global climate system might lurch in a way that could cause serious harm around the world. Climate change therefore does present legitimate grounds for concern, but it is not yet a crisis, and not yet clear that it will be—or that it will not.

Predictably, the 2013 report touched off frenetic spinning from both sides of the ideological divide. Environmental activists seized on the slight increase in the IPCC's already very high degree of certainty that manmade greenhouse gas emissions have been responsible for the rise in global temperatures over the past half-century. Conservatives vaunted the fact that, of the range of warming estimated to occur if carbon dioxide concentrations double, the lower bound was only 1.5 degrees Celsius, rather than the 2.0 degrees Celsius that the 2007 report had predicted. But the upper bound—the real reason for concern—was unchanged at 4.5 degrees. In fact, after twenty-plus years of climate science research, the range of uncertainty about this critical measure is again as wide as it was in the early 1990s.

While climate science faces daunting epistemological problems, a sober reading of its findings implies that while climate change is not an imminent crisis, it is a real phenomenon worthy of attention.

Action, Inaction, and Folly: A Policy Overview

In the United States, climate policy proposals have been strongly shaped by the aims of the environmentalist left, particularly its insistence that climate change must be stopped, at almost any cost, by sharply curbing greenhouse gas emissions. But existing U.S. policies toward curbing carbon emissions have had, at best, a trivial impact on climate change, and they will not make a significant difference in the future, since U.S. emissions are too small a share of the global total for realistic cuts to have much impact on climate.

According to a 2013 International Energy Agency report, just under 17 percent of the world's carbon dioxide emissions come from the United States, and our share of the total is falling, owing to flat U.S. emissions and the swift growth of emissions by developing countries. China accounts for roughly 25 percent of world emissions, and its share has been booming over the past decade and a half. Other major emitters include Japan, Russia, and Canada—countries that have abandoned their Kyoto Protocol commitments to restrict greenhouse gases—and India, a large but developing economy that, like China, is exempt in the first place from meeting

the Kyoto emissions targets. For the most part, only countries outside of the Organization for Economic Cooperation and Development (OECD) still pay even lip service to the Kyoto Protocol, and they do so mostly because it gave them a pass on emissions targets while obligating most OECD countries to reduce emissions.

There are good reasons why many countries hesitate to curb greenhouse gas emissions. Curbing emissions will limit the supply of low-cost fossil fuels and thereby slow economic growth. But the benefits of emissions control are uncertain and, for the most part, they lie in the distant future. Instead, economic development may be the best defense against climate change. As an economy develops, it becomes less weather-dependent. Wealth provides the wherewithal to adapt to climate change and to buffer whatever harms it may bring. And the success of a given country's development strategy does not depend on the implausible assumption that the governments of nearly two hundred other countries will all somehow reach an accord to impose higher energy costs on their own economies.

Still, with the support of the environmental movement, President Obama is plunging ahead with costly new U.S. greenhouse gas controls. Republicans in Congress and pundits on the right, not entirely without reason, are heaping scorn on the Obama measures. Increasingly, they have focused on the Obama plan's fatal flaw, its high economic costs, with no real prospect of producing an effect on climate. Some of them have also questioned whether climate change will pose as much of a threat as environmentalists say it will, and others, like Oklahoma Senator James Inhofe, have claimed that climate change is simply a hoax.

For the most part, controlling greenhouse gas emissions has been an aim of the left. But President George W. Bush cited climate change as one reason for signing into law the 2007 Energy Independence and Security Act, which, among other goals, mandated that the average fuel economy of American automobiles be 35 miles per gallon by 2020. President Bush also supported mandates and subsidies for ethanol and for other "clean energy" programs, though his rhetoric justifying these policies tended to focus more on American energy independence than on climate change.

President Obama—who, in a now risible speech during the 2008 Democratic primaries, said that his campaign would be looked back on as "the moment when the rise of the oceans began to slow and our planet began to heal"—has had a more explicit and ambitious climate change agenda for his administration. In addition to continuing the subsidies and mandates initiated by previous administrations, the president took advantage of the 2009 American Recovery and Reinvestment Act to vastly

increase subsidies for an assortment of green energy schemes. President Obama has also used his executive powers to raise fuel economy standards from President Bush's 35 miles per gallon to 54.5 miles per gallon by 2025. The most ambitious Democratic climate change policy to date has been the proposed 2009 American Clean Energy and Security Act (the "Waxman-Markey bill"), which combined a cap-and-trade approach with an array of command-and-control measures. The bill failed, despite the support of President Obama, who has since shifted his focus to technology subsidies and new regulatory mandates.

In June 2013, the president launched a program that would limit carbon dioxide emissions from power plants. Since no political consensus for such controls exists, this plan was not implemented through legislation but rather through executive action. The Environmental Protection Agency has cobbled together new regulations using a law, the Clean Air Act, that even proponents of greenhouse gas abatement had earlier admitted is poorly suited to the task.

Policymakers in the United States have also pursued an approach to climate that generally enjoys at least some support from both sides of the partisan divide: public spending on research and development for energy sources which purport to lower greenhouse gas emissions. Of course, much of that apparent consensus derives from the fact that energy innovation projects are often used as a form of pork-barrel politics, and officeholders in both parties are partial to pork. The Department of Energy has various new "innovation" programs, at least one of which, the Energy Advanced Research Projects Agency (ARPA-E), may hold some promise. However, the program is as yet entirely unproven.

But while the right kind of spending on basic research for energy can make sense, most of what the U.S. government is doing to promote new energy sources is likely to lead only to a large-scale waste of resources. An incisive recent analysis by Butler University economist Peter Z. Grossman has documented that since the 1970s, Washington has spent over $200 billion in research and development alone in trying to deliver on its repeated promises to transform U.S. energy technology. The plain truth is that it has nothing to show for all these programs, promises, and dollars spent.

Such an extended record of unbroken failure on energy policy should prompt a rethinking about what has gone wrong. (And indeed, at least the conservative parts of the U.S. electorate are growing more skeptical about alternative energy.) But why is the record so bad? Part of the problem is that, as energy sources, fossil fuels have some superb qualities. Then

too, the industries that produce these fuels have proven to be wonderfully innovative. Meanwhile, renewables, absent cheap energy storage, are badly flawed as an energy source. In other words, in economic and technical terms, the challenge of supplanting fossil fuels is a daunting one.

The new techniques for extracting shale oil and gas have raised the bar still higher for making green energy competitive against fossil fuels. Indeed, an insightful new study by Brookings Institution senior fellow Charles R. Frank, Jr. shows that natural-gas-fired power plants now offer far more cost-effective means of reducing greenhouse gas emissions than do current wind and solar power sources. These reductions, moreover, are occurring without costly new legislation; in fact, mandating the use of wind and solar power is likely to slow progress on abatement.

The Impractical Politics of Curbing Carbon Emissions

Understanding the gridlock of our climate politics requires understanding some of the key components of the environmentalist outlook that frames the left's approach to climate policy. The first is "global legalism"; the second is the role of the administrative state as a tool for social engineering; the third is the movement's strong sense of moral mission, which motivates it but which also tends to muddle its tactics. These three ideological proclivities together prevent the left from devising workable responses to climate change.

Without strong global cooperation, schemes to curb greenhouse gas emissions are bound to fail. Since a full-fledged global administrative state is hardly in the offing, environmentalists tend to believe that the basis for international cooperation on climate change will come from global legalism—the theory that over time international legal norms will exert ever stronger moral suasion, in the end compelling states to adhere to the global consensus expressed by such morally authoritative bodies as the United Nations and its subsidiary climate groups.

The trouble with this approach is that legal norms are too weak to defeat the incentive to free-ride on a global policy of greenhouse gas control. Almost all states are already enjoined under the 1992 U.N. Framework Convention on Climate Change (UNFCCC) to reduce greenhouse gas emissions. That agreement came into force in 1994, with the lofty but vague goal of stabilizing emissions "at a level that would prevent dangerous anthropogenic [human-induced] interference with the climate system." Over the subsequent two decades, green lobbies like the Environmental Defense Fund, the Natural Resources Defense Council,

and the World Wildlife Fund have trailed climate diplomats from one UNFCCC conference to the next, but for all their globetrotting, the dream of an effective international accord on greenhouse gas control is no closer today than it was then.

Why have global legal norms been so ineffective at curbing greenhouse gas emissions? After all, they have been able to resolve or at least smooth over other problems of global coordination. But the problems that global norms have addressed successfully are often those that arise when all states would benefit from some common standard but differ as to which standard they prefer. In these cases, once an agreement is reached the benefits provided by adherence to the common standard will make it largely self-enforcing.

By contrast, any pact on greenhouse gas control would be far from self-enforcing, as parties would be tempted to cheat—enjoying the benefits of other countries' restraint without restraining themselves. To keep free-riding in check, one or more states, and typically at least one of the great powers, would need to be willing to bear the costs of enforcing norms on other states—costs that are often greater than the potential enforcers would be willing to pay. There is little reason to be optimistic about the prospects of wealthy democracies taking up such costs.

Greenhouse gas control is a deeply intractable problem of collective action. According to a 2011 report by the National Academies of Science, stabilizing atmospheric greenhouse gas levels would require driving emissions down by 80 percent. But at the same time, the world must somehow also supply the energy needed to raise living standards for a growing population, especially in poorer countries that need more energy to grow their economies. Doing both these things at once is a tall order. Serious carbon dioxide abatement demands huge changes in basic infrastructure, lifestyles, and institutions in order to curb energy consumption or replace fossil fuels with alternative energy sources. Imposing such onerous transformations upon society is not something most governments have the power to accomplish, much less the political will.

In the absence of coercive global power, we are left with the supposed power of legal norms. But in the years since the UNFCCC was negotiated in 1992 and the Kyoto Protocol was signed in 1997, emissions have remained on their upward path. The climate norms set by the United Nations and by other international agreements have had little real effect on policies and practices in the countries that emit the most greenhouse gases. In part, this is because these norms track the values of liberal thinkers in wealthy democracies where substantial numbers of people

are seriously concerned about environmental issues and can afford to act on that concern—values that are contentious even in the countries from which they originate, much less in developing and nondemocratic countries. The facts speak for themselves. Today's international legal norms are no more able to curb emissions than the norms of the 1928 Kellogg-Briand Pact were able to ban war as an instrument of resolving international disputes.

Even in the United States, where environmentalists have more influence, their domestic strategy of using the administrative state to implement extensive social engineering to curb greenhouse gases is stymied by political realities. The political structure many environmentalists seek would require a vast increase in the state's control over society, with business and government becoming ever more entangled. But the cronyism that results from extensive state involvement in the economy would eventually undermine environmentalists' own efforts, making government—their chosen vehicle for change—increasingly ineffective. Massive government control over the economy would not turn out to be the remedy that environmentalists hope for.

Another check on the political influence of environmentalists is that the societal transformations necessary to rein in greenhouse gas emissions would be so disruptive that the prospect sparks fierce resistance, much more so than did the control of the local pollutants originally regulated under the Clean Air Act. Support for greenhouse gas abatement is also relatively weak because the payoffs are so diffuse and distant in time compared to the immediate and obvious improvements in air quality that resulted from restrictions on pollutants like soot, or the compounds that contribute to acid rain. Environmentalists, therefore, must forge a large and diverse coalition with groups that often have no direct interest in preventing climate change as such, like providers of alternative energy. But these kinds of alliances lead to pork-laden climate legislation that is often just tangentially related to greenhouse gas emissions, like subsidies for electric cars or ethanol fuel mandates.

The weakness of the political support for greenhouse gas control also motivates environmentalists to hide the true costs of abatement policies from the public. Therefore, they oppose policies that have a clear price tag, such as a carbon tax. Their worry about public support is justified, since recent survey data show that voter concern about the state of the environment is low, that the level of concern is falling, and that the level of concern about climate change is even below that for other environment issues.

Determined to see emissions controls enacted despite weak public support, environmental groups have come to prefer command-and-control mandates, the costs of which are less transparent to the public than taxes or subsidies. But regulators lack detailed knowledge both about how much their regulations will cost the affected businesses and about the effects of climate change on the U.S. economy. Without that knowledge, they cannot assure that their mandates will lead to net benefits rather than to net costs. And environmental groups' insistence on very steep cuts to emissions despite the high U.S. capacity to adapt to climate change makes it nearly certain that their approach will carry high costs. So greenhouse gas abatement is caught on the horns of a dilemma: transparent and modest measures that might yield net benefits to society cannot be adopted, but the crude mandates that the executive branch can impose are very likely to entail net costs rather than benefits.

Green Faith, Morality, and Symbolism

The enormous costs that greenhouse gas restrictions would impose on society have not led committed environmentalists to rethink their approach. What, then, explains the movement's unswerving course? There is surely some organizational inertia keeping major environmental groups from adopting new strategies. But this cannot account for the movement's continuing appeal with its grassroots members.

The main reason the campaign to restrict emissions attracts grassroots support is that it speaks to its members' ethical values, which for many have an almost religious significance. Robert H. Nelson, in his 2009 book *The New Holy Wars*, and in the pages of this journal (see "The Secular Religions of Progress," Summer 2013), has argued that many environmentalists see mankind as marked by a kind of original sin—not against God, but against nature. In many other respects, too, Nelson and others point out that environmentalism shares some broad features with Judeo-Christian tradition: its own version of a mythical Edenic paradise, a fall, and an ethic of anti-materialist redemption. Perhaps it shouldn't come as much of a surprise that Judeo-Christian motifs are present in a movement that developed in the West. But these are just forms; the origin of the moral energy that animates them is a bigger question that an analysis of the religious elements of environmentalist symbolism cannot alone address.

To better understand and explain the environmentalist ideology, we might be well served by turning to University of Michigan sociologist

Ronald F. Inglehart's theory of value transitions in post-industrial societies. According to Inglehart, who first proposed his influential theory in a 1971 paper, generations raised under conditions of prosperity will prioritize post-materialist values (such as autonomy and self-expression) above materialist values (like wealth and economic security). Inglehart's theory is in some respects the sociological corollary of Abraham Maslow's psychological hierarchy, which posits that individuals will first secure their basic survival needs and then move on to pursue higher goals of esteem and self-actualization. In his 1997 book *Modernization and Postmodernization*, Inglehart further argues that the pursuit of materialist values requires instrumental rationality—the ability to find realistic and effective means toward one's ends—and that this type of reasoning becomes less prominent among post-materialist generations, focused as they are on expressing their abstract values rather than on achieving concrete aims.

Green climate policy is one of the paradigmatic examples of post-materialist values applied to contemporary politics. Greens do not just want a cleaner environment; they also want the world to embody a complex of other post-materialist values that pervade their grassroots base. Much of the movement's original momentum comes from a generation for whom self-expression is a fundamental aim; and, as Inglehart writes in a 2008 article, "self-expression values give high priority to environmental protection." But while self-expression is not a goal that demands instrumental rationality, clear thinking about the relationship between means and ends is critical for effective policymaking, and is often lacking in green politics.

Environmentalists contend that it is urgent to mitigate the threat of climate change, but they insist on doing so primarily by curbing emissions, while resisting the use of low-cost means to adapt, which seem to involve the immoral acceptance of at least some climate change. And proposals for intentionally engineering the climate to lessen the risks of rising greenhouse gas levels, a potentially cost-effective and efficient measure, scandalizes many environmentalists—though others have cautiously endorsed some research along these lines. Some environmentalists have claimed that geoengineering is a "moral hazard" since it might undermine the perceived need for restrictions on greenhouse gas emissions. Others have described geoengineering as "methadone for carbon addiction," as if the ultimate problem isn't climate change but fossil fuel usage—which is to be viewed not as an activity with harmful side effects to be mitigated, but an intrinsic evil. These arguments are aimed at narrowing the range of policy options to those that dramatically reduce

greenhouse gas emissions, mainly by reducing fossil fuel consumption. This approach is the only one available if one's goal is complete, authentic adherence to environmentalist values, but it is a very poor strategy for minimizing the costs both of climate change and of the measures taken to combat it.

Even within the goal of lowering emissions, environmentalists seek to enforce a number of restrictions that are closer to taboos and fetishes than they are to sensible policy approaches. For instance, a carbon tax would likely be the most cost-effective policy for encouraging abatement. But some environmentalists consider even a carbon tax to be too permissive, since nature is sacred and carbon taxes involve selling its purity for money. As a matter of principle, they often reject applying cost-benefit analysis to climate change, embracing instead the precautionary principle. As psychologist Philip Tetlock has documented, tradeoffs that are perceived as sacrificing a sacred value for a secular value trigger moral outrage. Environmentalists who are outraged at the notion of making a commodity of nature therefore seek to do more than make the use of alternative energy sources profitable; they want to mandate it, signaling its moral superiority.

But not all alternatives to fossil fuels are acceptable to environmentalists. Nuclear power remains a taboo for many greens. Nor will it do to substitute natural gas for coal. Switching to natural gas could greatly reduce U.S. carbon emissions, and could do so quickly and relatively easily. Yet groups like the Sierra Club see natural gas as just another fossil fuel, the use of which will further pollute the Earth. Granted, some of the more pragmatic groups, like the Environmental Defense Fund, take a more nuanced stance, but even they favor a great deal of command-and-control regulation of drilling. And organizations like the Sierra Club that put greater stress on their grassroots base for financial support are likely to be more closely attuned to the environmental movement's real values.

Environmentalists' shaky grasp on instrumental rationality leaves them vulnerable to symbolic politics—to supporting or opposing policies mainly on the basis of the ideologies they are held to represent rather than their practical outcomes. Rarely has there been a clearer case of purely symbolic politics than the green crusade against the Keystone XL pipeline. Without the government's approval, the pipeline cannot be built, and a broad coalition of environmental groups has battled for several years to obstruct and defeat it. Even groups that are sometimes more moderate, like the Environmental Defense Fund, have signed on to the campaign opposing the pipeline.

But after an exhaustive study, the State Department's final report on the pipeline, published in January 2014, concludes that "approval or denial of any one crude oil transport project"—including Keystone XL—"remains unlikely to significantly impact the rate of extraction in the oil sands, or the demand for heavy crude oil at refineries in the United States." While the verdict on the pipeline would affect where petroleum from the Albertan oil sands will be refined, it does not change the total amount of it that eventually will be extracted and burned, nor does it affect the total amount of foreign oil the United States will import and use.

Yet the environmental movement has turned a deaf ear to the State Department's findings (which could largely have been deduced from the basic unity of the global market for crude oil). The years-long campaign against the pipeline expresses the participants' values, and has for that reason been a good fundraising opportunity. But the anti-pipeline protesters seem unconcerned that neither success nor failure will affect their ultimate goal of reducing greenhouse gas emissions. Nor has even one mainstream environmental group dared to express public doubt about the wisdom of a huge campaign to achieve a goal that is utterly devoid of real-world impact.

With the Keystone XL pipeline, as elsewhere, environmentalist politics is guided less by the practical realities of particular proposals than by abstract and often vague concepts that are sometimes entirely devoid of actual policy aims. This disposition became evident in a recent Senate Democratic filibuster on climate change, in which during fifteen hours of talking about the issue, no policy suggestions were made.

Furthermore, environmentalist politics is driven by the fear that all manmade change to natural systems may aggravate climate change. Green activists have done everything in their power to sound the alarm bells warning of human-induced climate change. Publishing countless books with titles like *Climate Cataclysm* and *Climate Wars*, they have proclaimed numerous half-baked, disastrous climate change scenarios. At one point, disaster supposedly loomed in the form of a potential sudden shutdown of the Atlantic Ocean's thermohaline conveyor current (the "scientific" basis for the 2004 film *The Day After Tomorrow*, in which the northern hemisphere is plunged into a new ice age by the effects of climate change). This outlandish notion has not been found plausible by the Intergovernmental Panel on Climate Change. And of course there are the hysterical claims made by Al Gore in his 2006 documentary *An Inconvenient Truth*, which warns of a possible twenty-foot rise in sea levels, while the latest IPCC report predicts that, even in the most extreme version of the highest-emissions pathway

that they studied, sea levels would rise by no more than three feet in the remainder of this century. Then there were the IPCC's own predictions of rapidly vanishing Himalayan glaciers, now seen as greatly exaggerated. False alarms in the past, of course, do not prove that the wolf will never come. But frantically sounding the tocsin every time some scientist conjures up a new nightmare scenario does not help the credibility of the issue.

The Politics of Taxing Carbon

While environmentalists have reacted to climate change with overly ambitious and impractical schemes, American conservatives have dismissed climate change on grounds that cannot withstand scrutiny. Conservatives generally aim at preserving the free market from undue government interference. But a stable climate is a public good in its own right, and the market alone is not up to securing it.

Indeed, climate stability is not just a public good; it is a global public good—and so the issue has fallen under the sway of the United Nations, hardly a favorite of U.S. conservatives. Moreover, the global nature of the problem of controlling greenhouse gases has meant that any accord on that issue must win the assent of great powers and geopolitical rivals like China and Russia. In climate talks, Democratic presidents have often cast the United States in the role of a suppliant to just these states. Thus, President Bill Clinton, at Vice President Gore's behest, agreed to the Kyoto Protocol even though it imposed significant costs on the United States and none at all on China, Russia, or India. Today, President Obama pretends that these same countries are committed to action on abatement because they have signed the vacuous Copenhagen Accord. Presidents Clinton and Obama have not withheld U.S. abatement measures until foreign states reciprocate; to do so would offend their environmentalist campaign donors and voters. Instead these presidents settled for bogus paper agreements in order to conceal go-it-alone U.S. emissions control schemes behind the illusion of reciprocity.

In opposing Democratic climate policies, conservatives have correctly hammered away at the futility of go-it-alone U.S. action, but they have also exhibited an unfortunate tendency to simply scoff at the validity of mainstream climate science. Conservatives' hopes in the 1980s that science would explode the threat of climate change were, at the time, not implausible. Many other environmental scares, after all, had proven to be more hype than substance. And many of the more outlandish claims about the threat of climate change have indeed been debunked.

But the scientific case for global warming has not collapsed. As a result, bald claims that manmade climate change is a hoax—which would imply that tens of thousands of scientists are engaged in a coordinated conspiracy—are slowly losing credence even for conservatives, while opinion polls suggest that a wide swath of the public feels rising concern about its effects. In a recent survey conducted by the Yale Project on Climate Change Communication, researchers found that 58 percent of registered voters said they will "consider candidates' position on global warming when deciding how to vote," and even 52 percent of Republicans agreed that global warming should be a medium or high priority for the president and Congress.

Of course, one can make too much of the trend; in part, the shift in opinion may reflect the slowly receding shadow of the public's far more pressing concern with the economy. Moreover, as already noted, the salience of climate change compared to other problems remains low. Still, the tide of public opinion appears to be running against sweeping rejection of mainstream climate science.

In spite of these trends, conservatives remain weak on the issue. Politically, a stance that is perceived as anti-science is likely to be especially harmful with younger and better-informed voters. Protesting that this perception is unfair will do little to change it—but proposing serious solutions might.

One proposal that has been put forward by a number of conservative scholars is a carbon tax. Conservatives have in the past embraced taxes as a mechanism for pollution control, with President Nixon proposing a tax on sulfur dioxide emissions, among the other environmental initiatives he presided over during his administration.

Scholars at conservative think tanks and organizations—the Hudson Institute, the American Enterprise Institute, the R Street Institute, the Energy and Enterprise Initiative, and others—have argued in favor of carbon taxes over cap-and-trade schemes for controlling greenhouse gas emissions. If the United States were finally able to secure a comprehensive global greenhouse gas control accord, a uniform economy-wide carbon tax would likely be the least expensive measure for implementing it. However, for the time being, a carbon tax remains politically implausible, though some proponents conjure scenarios where it could be passed: for instance, with carbon tax revenue allowing cuts in income taxes as part of a fiscal grand bargain (this is called the "revenue-neutral" approach), or becoming a source of revenue for federal transfer payments.

Questions about the merits of these proposals can quickly devolve into arcane disputes about the validity of rival economic models. Two recent

studies assessing the impact of a $20-per-ton carbon dioxide tax, one by scholars at the Massachusetts Institute of Technology and another by scholars at the National Economics Research Association (NERA), reached very different conclusions. The M.I.T. study found that the tax would yield net benefits to society by 2025, while the NERA scholars found that it would cause a net 0.5 percent loss for the economy by 2023. The difference in these two results has nothing whatever to do with environmental impact, but rather reflects conflicting measures of the proposed policy's economic impact, specifically, the "deadweight loss" that could be expected.

Perhaps, though, a look at the politics can save us the trouble of wandering too far afield into the economic tall grass. The political realities surrounding a carbon tax are daunting, for four broad reasons. First, selling a carbon tax to the American people defies the logic of electoral politics. Any greenhouse gas abatement policy will impose costs on many voters, and candidates for public office rightly dread backing policies that will cause voters to punish them at the polls. It is therefore not in a candidate's interest to support a carbon tax, as its benefits will be obscure to most voters while its costs will be obvious. The longer the causal chain that the voter must follow to connect a policy to an effect on him, the smaller will be the number of voters who will make the connection. Voters easily perceive the benefits of pollution *regulations*: if the government restricts pollution, voters can immediately grasp the advantages of cleaner air. But the benefits of a pollution *tax* are far more difficult to envision, requiring that a voter have intimate knowledge of how competitive markets work. At the same time, it is easy to point to the costs imposed by a tax, while the costs of complying with regulations can be downplayed. For these reasons, it is much easier to gain political support for regulations than for taxes to achieve greenhouse gas abatement.

Second, from the standpoint of conservatives—whose support would be needed to pass a carbon tax—the way the cost of the tax would be distributed is politically toxic. The authors of a 2009 study for the American Tax Policy Institute found that a carbon tax would hit hardest at the Republican-leaning "mid-America and the southern states." The study's authors also found that making the tax revenue-neutral—using revenue from the tax to lower income tax rates—would further increase the relative losses in those regions, since lowering of income taxes would benefit mainly the higher-income regions on the coasts. Carbon taxes also harm fossil fuel producers, who are often supporters of the right, while they benefit the largely Democratic constituents of wind and solar energy

producers. For Republicans to harm their constituents so severely, they would have to very badly want a fiscal "grand bargain." Judging from the recent political theatrics over budget showdowns like the "fiscal cliff," it seems unlikely that there is enough support among Democrats for a carbon tax to make the other kinds of large concessions Republicans would demand in return, like structural reform of the U.S. entitlement system.

Third, Democrats are unlikely to support carbon taxes much more than Republicans would. There is by no means universal agreement on the left that carbon taxes, which depend on markets and the profit motive, should be the preferred climate change policy. And Democratic officeholders rightly fear that a carbon tax would expose them to Republican charges of taxing-and-spending. Conservative backers of a carbon tax should therefore not count on much support from the left.

Finally, it is highly unlikely that the American legislative process would produce the sort of uniform carbon tax that its supporters hope for. The U.S. policy process is rife with veto points. Within both houses of Congress, committee chairmen can stop a proposal in its tracks, and even a bill that is passed by both houses can still of course be vetoed by the president. Interest groups often use their influence at one or more of these veto points to demand a toll in the form of special provisions that secure particular advantages for them, including getting exempted from a measure entirely. No tax bill ever runs this gauntlet unscathed.

Because of these severe political challenges to a carbon tax, few conservatives seeking public office have seriously committed themselves to it. A few Republican members of Congress have flirted with it, but so far the conservative carbon tax has yet to pass the market test among those who must buy it for it to succeed. The carbon tax is likely to end up much like the oft proposed but never enacted 50-cent-per-gallon gas tax hike. Measures of this sort are popular with pundits who do not face reelection contests, and who never tire of berating politicians for opposing such policies. But officials under the pressures of electoral politics have a great incentive to ignore them.

A Long-Term Climate Policy for the Right

There seems to be every reason to expect that the United States will be living with climate concerns for a long time. At present, there are many uncertainties not only about whether greenhouse gas abatement or any other measure would be an effective way of dealing with climate change, but about the very extent and nature of the threat. Perhaps the

most certain prediction about the future of the climate issue is that it will involve surprises. Climate policy would seem to place a premium on what economist Douglass North called "adaptive efficiency," the capacity of a system to limit the harm from disruptive shocks, together with a broader competence in taking advantage of change and learning from experience.

The United States has historically displayed a great deal of adaptive efficiency. Its political system is flexible in responding to new challenges and including new interest groups, and its economy still gives fairly free rein to market forces, although significantly less so than just a few years ago. A sensible climate policy would play to these American strengths by focusing on adaptation to climate change, at least for the next several decades.

A second point of focus for American climate policy should be acquiring new useful knowledge. Climate scientists currently lack detailed knowledge about the regional impacts of climate change, which hampers the best available strategy for confronting it—adaptation. The Obama administration is proposing new public works spending to help Americans prepare for the impacts of climate change. Some of these projects may be worthwhile, but we still need great advances in our knowledge of likely patterns of change. Once individuals, markets, and local governments know more, they can adapt through better-informed decisions of their own.

Another area in which more knowledge is needed is climate engineering, aimed at offsetting warming. Engineering could involve harnessing and managing naturally occurring phenomena. For example, some researchers have proposed enhancing the layer of sulfuric acid that already exists in the lower stratosphere, increasing the amount of solar radiation that would be reflected back into space. By dampening or halting the rise in temperature, climate engineering might lessen some of the risks of climate change. But the concept's value remains uncertain, and reckless implementation of some climate engineering strategies could result in harms resembling those of climate change itself. *The question at hand today is therefore not whether to deploy climate engineering.* Before any concrete steps can be taken, much more research is needed into the risks, benefits, and costs of various options. In light of the risk posed by the small but real chance of rapid climate change in the future, more research is simple prudence.

Until we know more, however, and absent a global accord on greenhouse gas controls, the United States should tightly limit its own measures to reduce greenhouse gas emissions. If the United States is acting alone,

abatement makes sense only as long as the costs at the margin do not exceed the climate-induced damage to the United States that our efforts would avert, and at the moment, the United States seems likely to suffer only a small proportion of the impact associated with climate change.

In contrast, the new Obama administration rules for calculating the benefits and costs of greenhouse gas abatement are a model of what the United States should not be doing. The president's rules, promulgated in 2013, decree that the United States must consider the marginal costs of harm caused by carbon emissions, wherever in the world those costs are incurred. By following these rules, the United States would bear a large portion of the costs while reaping only a small portion of the benefits of greenhouse gas abatement. Without other countries enacting similar measures—especially the other major producers of greenhouse gases—we would receive no benefits from foreign emissions reductions in exchange for these costs. If America wishes to increase foreign aid for countries damaged by climate change, there are many ways to do that more efficiently than through costly greenhouse gas control measures. Of course, the United States should be open to eventual global cooperation on greenhouse gas control, but it cannot force the pace of this cooperation. And compared to most other major governments, Washington can afford to be patient about greenhouse gas control, as the great ability of the United States to adapt to climate change grants it a very strong hand in any global bargaining session. Washington should, therefore, be able to obtain good terms from rivals like China and Russia. American negotiators should also insist that compliance be fully transparent, which is not a small matter when dealing with corrupt oligarchies.

Avid proponents of go-it-alone U.S. action will claim that America leads the world in legal and moral norms, and other countries will follow. But China and Russia have not followed our lead on protecting human rights, nor do they reciprocate U.S. protection of intellectual property rights—both being norms that, like greenhouse gas control, run counter to the political interests of those countries' governments. China especially does not emulate the basic U.S. formula for long-term economic growth and political stability—open markets and an open, democratic political process. There have been rumors that some Chinese officials have floated the idea of a carbon tax and other environmental measures; but if they do finally implement such measures, it will not be because the United States adopted the Clean Air Act decades earlier. The great allure of the United States as a model for other nations is a flattering idea for Americans, but it is not a basis for serious policy decisions.

A new vision for U.S. climate policy instead requires three elements. The quest for new knowledge about the science of climate change and the technologies required to combat it is vital. Second, our climate policy must also be open to using the full range of available options to lessen the threat of climate change, not just greenhouse gas control. Finally, the United States must adopt a less hubristic view of its role as a supplier of global public goods. For decades, the left and right alike have assumed that the United States can and should serve as the prime supplier of global public goods. The two sides have merely disagreed about which kinds of goods were important. The right focused on oil security and displayed a strong bent toward the use of armed force. The left focused on climate change, biodiversity, and human rights; its approach stressed costly domestic regulations and vague hopes about global legalism.

But the world has changed. The U.S. share of the world's GDP has fallen, and it will continue to do so. The United States lacks the wherewithal either to bribe or to coerce other powers to adopt greenhouse gas restrictions, and in the absence of genuine shared will by other major emitters, it runs counter to our interests to adopt these measures on our own. What is needed, instead, is a climate policy that strives to deepen our scientific understanding of the challenges we face, to make incremental improvements where they are cost-effective, and to eschew wishful thinking about the political and scientific realities of the world in which we live.