The Strategic Case for U.S. Climate Leadership

How Americans Can Win With a Pro-Market Solution

James A. Baker III, George P. Shultz, and Ted Halstead

In the United States, the case for greater action on climate change is typically made on environmental grounds. But there are equally compelling economic, geopolitical, and national security rationales for the United States to lead the world on climate policy. Even those who remain skeptical of the environmental urgency of the problem should recognize the overwhelming strategic advantages of U.S. climate action at home and abroad.

Those who oppose greater U.S. engagement and ambition have legitimate concerns. These concerns tend to fall into two buckets. The first is economic:

JAMES A. BAKER III is Honorary Chair of Rice University's Baker Institute for Public Policy and served as U.S. Secretary of the Treasury from 1985 to 1988 and U.S. Secretary of State from 1989 to 1992.

GEORGE P. SHULTZ is Thomas W. and Susan B. Ford Distinguished Fellow at the Hoover Institution and served as U.S. Secretary of the Treasury from 1972 to 1974 and U.S. Secretary of State from 1982 to 1989.

TED HALSTEAD is Chair and CEO of the Climate Leadership Council. He is a co-author (with Michael Lind) of *The Radical Center: The Future of American Politics*.

the chief worry is that global climate solutions could put the U.S. economy at a competitive disadvantage with its trading partners and reduce American living standards. The second set is geopolitical: some observers wonder why the United States should reduce its own greenhouse gas emissions if other countries won't do their part.

But a well-designed U.S. climate policy can replace national vulnerabilities with major strategic opportunities. We propose here an environmentally ambitious, economically sound, and politically feasible plan that situates the United States at the forefront of a clean energy future, enhances the competitiveness of U.S. firms, and allows all Americans to benefit directly from emission reductions. Such a plan would also speed up and strengthen the United States' economic recovery once the immediate health concerns from the novel coronavirus outbreak subside.

AMERICA'S CARBON ADVANTAGE

Consider first the relationship between national climate policy and international competitiveness. Contrary to the traditional perception that more action on climate change would undermine American competitiveness, the lack of a coherent national climate policy now poses a significant risk to U.S. firms. That is because the current rules of global trade effectively subsidize carbon-intensive production overseas and prevent the United States from reaping the economic benefits of its competitive advantage in low-emission manufacturing.

The chief competitors to U.S.-based firms in China, India, Russia, and other countries generally operate under lax environmental standards and produce

goods in a more carbon-intensive manner. Yet they currently pay no penalty for this. For example, China is now the world's largest steel manufacturer, even though its average production of steel is more than twice as carbon intensive as the United States'. A similar pattern emerges in a variety of industries: motor vehicles, chemicals, even solar panels and agricultural products. In each case, U.S.-based firms compete on an unlevel playing field because the current rules of the game put them at a competitive disadvantage. Rather than lower U.S. climate ambitions, a better response would be to encourage U.S. trading partners to raise their standards or penalize them for their polluting ways.

Further misconceptions exist about technology. Republicans are right to focus on clean energy innovation as the key to reducing carbon emissions. Yet some conservatives seem not to realize that the United States is falling behind in the clean energy race. The innovation coming out of U.S. universities, national labs, and businesses is impressive, but too few of the results are being produced in the United States and too little of it is making its way into commercial applications.

Here, too, a comparison with China is revealing. China is now the world's top producer, exporter, and user of wind turbines, solar panels, and batteries—the essential building blocks of a clean energy economy; the United States is in fourth place, trailing Germany and Japan. China also accounts for 60 percent of global electric vehicle sales, and the country has long-range plans in place to turn itself into the global leader in developing the fuels and cars of the future. The United

States cannot remain the world's foremost power if it is not also its leading energy innovator.

Another common misconception is that climate action in the United States is too expensive or risks undermining the U.S. economy. Thanks largely to the shale and fracking revolution pioneered in the United States, market prices for natural gas have fallen by 70 percent since 2008, so the cleanest fossil fuel is now also the cheapest fossil fuel. During roughly the same period, the cost of solar power dropped by nearly 90 percent, and the price of wind power dropped by 70 percent. By capitalizing on efficiency gains and replacing coal with natural gas and solar and wind energy, the United States has cut its greenhouse gas emissions by 12 percent since 2005, all while maintaining a vibrant economy.

Although the United States and its trading partners have a long way to go in reducing emissions, a fundamental paradigm shift is occurring. Climate action and economic growth, far from being mutually exclusive, are not only compatible but also increasingly interdependent.

The U.S. economy has prospered in recent decades because the U.S. public and private sectors were the first to embrace the communications and information technology revolutions. The transition to clean energy promises equally far-reaching economic advantages. Nextgeneration renewables and nuclear energy could substantially drive down the perunit cost of electricity, just as the digital revolution drove down costs in recent decades. That is why China is investing so heavily in these sectors. And that is why the United States could be putting its global economic leadership position at risk if it continues to ignore this transformation.

Many corporate leaders have already come to this realization and are pushing for climate action, not just because their customers and shareholders are demanding it but also because of facts on the ground that are affecting their bottom line. The potential domestic economic toll of a warming planet is already difficult to ignore. Greater flooding, storms, wildfires, and droughts harm sectors as varied as real estate and agriculture. Today, taxpayer spending on federal disaster relief is almost ten times what it was three decades ago, after adjusting for inflation. Climate change will exact an ever-greater toll on the U.S. economy over the next several decades if emissions remain on their current course.

RISKS TO THE NATIONAL INTEREST

The United States' lack of a coherent climate strategy also threatens its national security and, most important, its position and influence in the international arena. The national security implications of climate change are substantial. New research published in Nature Communications has estimated that rising sea levels will put up to 340 million people at risk of annual flooding or permanent inundation during the next 30 years, largely in Asian megacities. The World Bank, meanwhile, has found that increased flooding, as well as food and water insecurity, in Latin America, sub-Saharan Africa, and South Asia alone could generate an additional 51 million to 118 million internal "climate migrants" by 2050. This could profoundly destabilize countries around the world, particularly those with poor governance.

As water scarcity gets worse, control over this vital resource will become a

growing source of conflict among states. The current tension between Egypt and Ethiopia over the Nile River foreshadows what might come. And the retreat of Arctic sea ice could change the balance of power among China, Russia, and the United States. A relatively ice-free Arctic would not only open vast new mineral riches to China and Russia; it would also alter world trade routes between Europe and East Asia.

Competition in today's multipolar world is characterized less by direct military confrontation among great powers and more by economic and diplomatic rivalry. Seen through this prism, the United States' lack of a long-term climate strategy harms its ability to promote American interests on a rapidly evolving world stage. The United States risks becoming a bystander, as a prior world order that was overly dependent on Middle Eastern oil gives way to a new one dominated by clean energy.

The winner of the emerging clean energy race will determine the economic and geopolitical balance of power for decades to come. The United States faces steep competition in this field. Russia is one of the United States' main challengers in energy; Moscow has flooded the world with cheap oil and gas through new pipelines and has unveiled a new generation of nuclear plants and fuel agreements with developing countries. Each such investment creates closer geopolitical relationships. Meanwhile, China and India are making major investments in renewable energy technologies (as well as coal-fired electricity). China, already a leading manufacturer of solar and wind tech-



With great emission comes great responsibility: at a steel mill in Hefei, China, March 2006

nology, seeks to dominate the coming transformation in energy storage and delivery, as well.

At the same time, a lack of economic incentives to reduce carbon emissions in China, India, and other developing countries has resulted in an uneven playing field that forces carbon-efficient U.S. and European companies to compete directly with rivals that have far weaker environmental standards. The lower energy-production costs in developing countries lure global firms away from the United States and Europe. China is adding to the competition by promoting carbon-intensive industrialization in other emerging economies, often powered by new coal plants built through its Belt and Road Initiative. Such investments risk saddling poorer countries with rising carbon emissions. As if that were not enough, China and other emerging economies

export their more carbon-intensive goods to the United States in what amounts to "carbon dumping."

The European Union poses a different kind of challenge. For the past 15 years, the EU has limited emissions through a trading system that allows companies to emit greenhouse gases based on the number of allowances they have purchased within a limited, or capped, marketplace. It is now dramatically expanding its climate-related regulations and planning to tax energy-intensive imports.

The United States and the European Union should be working together to defend their collective advantage over more carbon-intensive competitors. Unfortunately, the regulatory burden Europe already imposes on U.S. firms will soon increase as the EU adopts tougher measures to combat climate change, sharpening transatlantic rivalries and reducing the opportunities for collaboration.

If Washington wants to avoid accepting new rules imposed by other countries, it should step up and set its own. Specifically, the United States needs to become the global front-runner in clean energy technologies and forge a U.S.-led climate alliance to advance its national interest. The country has everything to gain from positioning itself, as it so often has, at the head of the table.

CLIMATE POLICY BY DEFAULT

An American-led global energy policy must be grounded in a coherent and cost-effective domestic climate policy. By default rather than by design, however, the United States has a national climate policy that leaves a lot to be desired and is clearly not getting the job done.

It consists of an array of federal climate regulations left over from previous administrations, many of them being unwound by the current one; a variety of federal tax credits and subsidies for both conventional and low-emission energy sources; a patchwork of state-based climate regulations and carbon-pricing regimes, which have proliferated in response to the retrenchment of federal policy; and a constellation of clean energy commitments and investments made by large companies, some of them aided by earlier federal subsidies and research investments. These four elements of U.S. climate policy ultimately leave all the key stakeholders in the debate dissatisfied—whether they be environmentalists, businesses, or voters of various political orientations.

The U.S. government has three main options for reducing emissions: regulations, subsidies, and carbon pricing. The United States has experimented

with regulations and subsidies for many years, with mixed results at best. Economists have long maintained that carbon pricing, which involves placing a fee on emissions to reduce them and to drive investment into cleaner technologies, is the fastest and most cost-effective way to cut emissions.

Several of the candidates for the Democratic presidential primary voiced support for some form of carbon pricing. Yet they also proposed costly regulations and massive government expenditures that would hurt businesses and the economy. Through both their rhetoric and their policies, high-profile figures in the Democratic Party have gone out of their way to demonize the companies that provide most of the United States' energy and that are among the largest investors in clean technology ventures.

Republican members of Congress, meanwhile, have started to signal that the era of climate denialism is over. Representative Kevin McCarthy of California, the House minority leader, has warned that the GOP ignores the climate issue at its own peril, and Mitch McConnell of Kentucky, the Senate majority leader, recently emphasized that the Republican Party needs climate solutions of its own. This represents a critical inflection point in the national climate debate.

Republicans still need to determine the cornerstone of their climate strategy. With the regulatory approach off the table, the GOP is leaning toward promoting clean energy innovation through tax credits and subsidies. So far, this has mostly taken the form of incremental proposals that do not add up to a coherent strategy.

Democrats and Republicans alike should accept the fact that neither regulations nor subsidies alone will get the job done and that compared with carbon pricing, these two instruments are much more expensive means of reducing emissions, requiring higher overall taxes and deficits. In the end, it is better to rely on the market rather than the government to determine winners and losers.

The time has come for both parties to embrace carbon pricing, which economists and business leaders consistently point to as the most business-friendly and environmentally ambitious way forward. The Republican Party, in particular, can play a major role in this transformation. As the party Americans most associate with business innovation and free-market solutions, the GOP is well positioned to set the terms of a cost-effective and politically viable climate policy breakthrough.

THE WAY FORWARD

In February 2017, we outlined what came to be known as "the Baker-Shultz Carbon Dividends Plan." Our starting premise was that Democrats and Republicans must work together with corporate America and environmentalists to find a market-based, small-government solution capable of overcoming the primary political obstacle to carbon pricing, the risk of harming American living standards. Our second premise was that in order to protect American jobs and competitiveness, the United States must give other leading emitters, such as China and India, a stark choice: do their fair share to reduce emissions or face economic penalties.

A broad coalition has since joined together to turn this plan into a detailed blueprint for bipartisan introduction,

hopefully in the current Congress. This coalition includes 19 Fortune 100 companies; three leading environmental nongovernmental organizations; opinion leaders from across the political spectrum; and in the energy sector alone, five of the seven oil and gas supermajors, the largest solar company in the United States, and three of the nation's leading utilities. Last year, our carbon dividends framework was also endorsed by over 3,500 U.S. economists, including the past four chairs of the Federal Reserve, 27 Nobel laureates, and 15 former chairs of the President's Council of Economic Advisers, including all eight former Republican chairs.

The first pillar of this approach would be an economy-wide and revenue-neutral carbon fee. Carbon pricing of this sort would produce faster and greater emission reductions at a lower cost to the economy than regulations or subsidies. Studies show that reducing greenhouse gas emissions by deploying today's most commonly used regulations and subsidies can cost, on average, between \$100 and \$600 per metric ton. These costs are largely hidden, contributing to the misallocation of capital.

By contrast, our transparent carbon fee would start at \$40 per ton and increase by five percent per year above inflation. According to modeling by Resources for the Future, an American nonprofit that researches resource use and allocation, if the plan were enacted in 2021, it would cut U.S. carbon emissions in half by 2035 from 2005 levels. If cumulative U.S. carbon emissions were not on track to meet that objective after five years, then our annual carbon-fee escalator would automatically increase from its base rate of five percent per year to 7.5 percent per year, and then to ten percent per year if

emissions were still not on track. The best modeling indicates that it is highly unlikely that this fee escalator would be triggered, but it is nevertheless an essential component of our approach.

The plan's second pillar calls for returning the revenue from carbon fees directly to the American people in the form of quarterly checks, or dividends. A family of four would receive approximately \$2,000 per year in carbon dividends in the first year, an amount that would increase over time as the annual carbon fee increased. According to a study produced by the Treasury Department in 2017, 70 percent of U.S. families—including the least well-off ones—would receive more, on average, in carbon dividends than they would pay in increased energy prices.

Using carrots is a much more effective way to build long-term support than relying on sticks. These provisions would align the economic interests of ordinary Americans with climate progress. And they would create a positive feedback loop: the higher the carbon fee, the lower the carbon emissions and the higher the dividend to all Americans.

Moreover, this approach would empower individual Americans to address climate change on their own terms. It is transparent and easy to understand, leaving decisions over energy choices to consumers and businesses. The fee would increase gradually, allowing people to adjust their habits. And it would incentivize conservation rather than imposing it. By contrast, regulations often take away people's decision-making power, handing it to far-away bureaucratic agencies that are often unresponsive to local concerns.

The dividend would also make the plan revenue neutral. Any climate plan with a high price tag will set off partisan

debates over how to pay for the changes and over the size of the government. By contrast, this plan would encourage a smooth transition to a low-carbon future by harnessing the power of the market and incentivizing the private sector to deploy its vast resources for innovation and investment.

PRO-BUSINESS PROVISIONS

A third pillar of the plan would involve significantly simplifying or eliminating regulations, which should be particularly appealing to Republicans. In the many cases in which the carbon fee would provide a more cost-effective policy solution, the fee should replace current and future regulations, which would no longer be necessary. For instance, it should supplant all current and future federal carbon regulations that apply to stationary sources of emissions, such as factories. Given that roughly two-thirds of U.S. carbon emissions currently come from such sources, this regulatory streamlining would provide significant benefits to businesses and the economy. Yet this is not a blanket deregulatory agenda; for example, it would not affect regulations covering other greenhouse gases, such as methane, or building and appliance standards, for which a carbon price is not as effective.

The plan would ultimately give businesses the predictability and flexibility they need to make long-term investments in a low-carbon future. Regulatory stability and a predictable price on carbon would spur clean technology innovation and investment by American companies. Government research and development is, of course, important in establishing a scientific foundation for

technological innovation, and targeted subsidies can accelerate the pace. But a rising carbon fee is the most powerful tool to unleash the innovative power of the private sector. By making it profitable to reduce carbon emissions, such a fee would incentivize businesses across the economy to take their discoveries and use them to pioneer new clean industrial methods and energy sources. Once a technology had proved its commercial viability, the fee would propel its wide and rapid deployment.

The fourth and final pillar of this plan is a carbon tariff designed to level the international playing field by applying the domestic carbon price to energy-intensive imports. This would enable the United States to fully benefit from and leverage its competitive advantage in low-emission manufacturing over many emerging economies. As with the carbon fee, revenues collected from the tariff would be returned to the American people in the form of a quarterly dividend.

Our carbon dividends solution doesn't appeal just to businesses and opinion leaders. When ordinary Americans hear about this approach, they like it, too. A recent survey by the research firm Luntz Global found that 66 percent of American voters would support the plan, as would an even larger share of voters under the age of 40 from both parties. The survey and research company Morning Consult recently polled Americans on all four pillars of the plan separately and found that roughly twothirds of voters support each one. And both of the polls found that climate change is one of the rare national issues on which Americans truly want a bipartisan solution.

A NEW CLIMATE ALLIANCE

Climate change is the ultimate foreign policy challenge, because any viable solution requires all major countries to act in concert. A domestic reduction of U.S. carbon emissions will be of limited value if other nations, such as China—now the world's top emitter—don't do their part. The United States, accordingly, must complement a carbon dividends plan at home with an international strategy that accounts for the failures of global action so far.

The most successful global environmental treaty to date was the 1987 Montreal Protocol on Substances That Deplete the Ozone Layer, which protected the ozone layer by phasing out the production of chemicals responsible for its depletion. Two of us (Baker and Shultz) played significant roles in negotiating that agreement, which succeeded because it was balanced and bipartisan.

As the ozone science developed through the 1980s, so did the technological options to address it. That gave U.S. President Ronald Reagan and contemporaries such as British Prime Minister Margaret Thatcher the confidence to negotiate a gradual but binding agreement that would encourage the deployment of a substitute class of chemicals. The approach was unanimously ratified by the U.S. Senate. Reagan called it a "monumental achievement." At the time, some environmentalists criticized the deal as too modest. But within just a few years, President George H. W. Bush was able to further increase its ambition, again with broad bipartisan support.

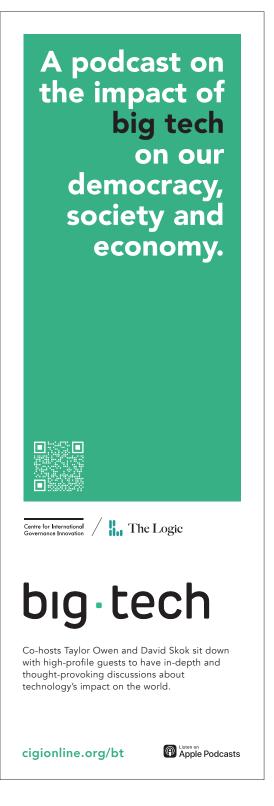
By contrast, 28 years of concerted international efforts—starting in Rio de Janeiro in 1992—to negotiate an effective treaty to reduce global greenhouse

gas emissions have proved disappointing. In large part, this is due to the far greater diplomatic challenge of convincing the leading economies of the world to alter their fundamental energy uses, with all the attendant geopolitical and economic consequences.

The 1997 Kyoto Protocol was unsuccessful, mostly because its binding obligations applied only to developed countries and not developing ones, such as China and India; it was ultimately rejected by the U.S. Senate. The 2015 Paris agreement fared better by getting all parties to the same table. But its voluntary pledge-and-review system lacked an enforcement mechanism. In 2017, the United States decided to withdraw from the agreement.

A new, more robust and realistic diplomatic strategy is now needed to address climate change. The United States should use its dominant position in the world economy, together with its extensive network of international alliances, to persuade other countries, particularly China and India, to do their fair share. The combination of a domestic carbon fee and a carbon tariff can be used to encourage Washington's closest trading partners to join a carbon customs alliance. Such an alliance would have a harmonized carbon price among its members, paired with a common trade policy applied to countries outside the alliance.

The United States' natural partners for an alliance of this sort are Canada, the United Kingdom, and the EU, which already have significant carbon-pricing measures in place and have expressed a clear interest in carbon tariffs. Each may hesitate to go it alone in imposing its own individual carbon tariff due to



the risk of igniting a trade war. But given the importance that U.S. allies now attach to climate change, there is good reason to believe that if the United States led the way, they would join.

Together, the North American and European economies make up nearly half of the world's GDP, giving them considerable market influence over other economies. That influence could grow even further if Japan, Mexico, South Korea, and members of the Association of Southeast Asian Nations joined the alliance. The very threat of being locked out of such a carbon customs alliance might be enough to move the largest emitters, including China and India, toward a similar regime.

An international climate alliance of this size would do more than just shape the rules of trade governing carbonintensive goods. It would also partly determine which economies will dominate the energy industries of the future. Naturally, those economies inside the coalition would have the upper hand in any international competition. It would be in China's strategic interest to join, rather than resist, a climate alliance whose price of membership was harmonizing its domestic carbon price with that of its trading partners. China is already experimenting with a domestic carbon price, so this idea is hardly farfetched. Beijing, after all, would likely understand that it would enjoy greater energy security inside such an alliance than it would outside it.

In the meantime, climate policy does not need to become another source of conflict between China and the United States. In fact, the two great powers could use the climate as a means of cooperating to bring greater prosperity to the world. As China emerges on the world stage, both China and the United States would do well to focus on areas of mutual benefit, even as both sides position themselves for the future.

The world faces a global challenge of uncertain and potentially enormous consequence that is within humanity's innovative capability to solve. Yet not a single major power is implementing adequate solutions, because none has found a viable political, economic, or international formula. The carbon dividends program we propose offers the best solution to resolve this impasse. Domestically, it would enable environmentalists, businesses, and political leaders to forge a lasting pact that leaves the majority of American families economically better off. Internationally, only a U.S.-led climate alliance can muster enough economic leverage to compel China, India, and other major economies to join, face carbon tariffs, or ultimately risk being shut out of the world's largest market. The United States must lead the way.

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