

**CLIMATE  
LEADERSHIP  
COUNCIL**

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# **THE PRICING ADVANTAGE**

**The 12 Reasons a National Carbon Fee is the  
Most Cost-Effective, Environmentally-Ambitious &  
Politically-Viable Climate Solution**



**By  
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## ABOUT THE AUTHORS

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## THE PRICING ADVANTAGE

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1. MOST COST-EFFECTIVE
2. ECONOMY-WIDE
3. FASTEST WAY TO REDUCE EMISSIONS
4. SELF-FINANCING
5. ENABLES CARBON DIVIDENDS
6. EMPOWERS THE AMERICAN PEOPLE
7. JUSTIFIES REGULATORY STREAMLINING
8. UNLOCKS INNOVATION
9. TECHNOLOGY-NEUTRAL
10. ENHANCES COMPETITIVENESS
11. PUTS AMERICA IN THE DRIVER'S SEAT
12. PROMOTES BIPARTISANSHIP



# EXECUTIVE SUMMARY

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**M**omentum keeps building in the United States to address climate change. Voters, including a majority of Republicans, want action to reduce harmful emissions. More and more businesses are calling for federal climate leadership. The time has come for a national climate solution. The big question is: what form should it take?

There are essentially three ways to reduce carbon dioxide emissions: regulations, subsidies and pricing. It's a critical decision. With the right approach, the U.S. can transition quickly to a low-carbon future while strengthening our economy, promoting innovation, protecting living standards and bridging partisan divides. By contrast, a suboptimal approach risks punishing businesses and workers while deepening partisan gridlock.

This report outlines what we call the pricing advantage – twelve ways that an economy-wide fee on carbon emissions outperforms a regulatory or subsidy approach. Taken together, they demonstrate the overwhelming economic, environmental and political superiority of carbon pricing as the cornerstone of America's climate policy. While complementary policies will always be needed, pricing should be the primary driver.

**“There are essentially three ways to reduce carbon emissions: regulations, subsidies and pricing. It's a critical decision.**

Economists agree that a carbon fee offers the most cost-effective and fastest way to reduce emissions. By contrast, most regulations are slower to take effect, narrower in scope and vulnerable to court challenge or reversal by subsequent administrations. Subsidies and big government programs that pick winners and losers are too expensive and unlikely to deliver sufficient emissions reductions.

Unlike regulations or subsidies, carbon pricing is economy-wide and lets the market and consumers,

rather than government, determine the best ways to decarbonize. Because carbon pricing is self-financing, we can reduce emissions without growing the size of government. A meaningful and rising carbon fee also justifies eliminating less-efficient carbon regulations, thereby giving companies the regulatory predictability and flexibility they need to innovate and make long-term investments in low-carbon technologies.

**“This report demonstrates the overwhelming economic, environmental and political superiority of carbon pricing as the cornerstone of America's climate policy.**

Carbon pricing can be specifically designed to empower ordinary people and broaden the appeal of climate action to new constituencies. In particular, returning all proceeds from a national carbon fee directly to American citizens in the form of quarterly “carbon dividend” checks can ensure that the vast majority of American families win financially from solving climate change.

Another crucial advantage is that a national carbon fee is uniquely suited to be paired with a border carbon adjustment, which can level the economic playing field, end the current subsidization of dirty manufacturing overseas and encourage our trading partners – such as China and India – to follow America's lead. This will protect and in many cases enhance the competitiveness of American companies and put America in the driver's seat of global climate policy.

For all these reasons, a well-designed carbon pricing policy such as the Climate Leadership Council's Baker Shultz Carbon Dividends Plan is the most promising way to reduce emissions at the necessary scale and speed, while benefiting American businesses and consumers. It offers the key to achieving a much-needed bipartisan climate breakthrough.

# 1. MOST COST-EFFECTIVE

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Economists have long agreed that a carbon fee is the most cost-effective way to reduce carbon emissions. That is, it will produce greater emissions reductions at a lower cost to the economy than regulations or subsidies. Consensus on this fundamental point was recently demonstrated by the largest and most prominent public statement in the history of the economics profession.<sup>i</sup> Studies show that reducing greenhouse gas emissions by the most commonly used regulations and subsidies can cost, on average, between \$100 and \$600 per ton.<sup>ii</sup> By contrast, credible modeling finds that a rising carbon fee starting at \$40 per ton – as proposed by the Climate Leadership Council – would far exceed the emissions reductions that the U.S. committed itself to under the Paris Agreement.<sup>iii</sup>

The reason a carbon fee is more cost-effective than regulations and subsidies is because it leverages the power of the market to incentivize consumers and businesses in virtually every part of the economy. It also unleashes the innovative power of business to pioneer new production processes and clean technologies. A carbon fee works in a number of ways simultaneously: encouraging energy efficiency, driving energy substitution and spurring energy innovation. By contrast, many regulations and subsidies are blunt and costly policy instruments with often just one end goal. That is why even if all Obama-era climate regulations had remained in force, they would not have come close to meeting the U.S. Paris commitment, which a \$40 carbon fee would far exceed.<sup>iv</sup>

**“ Unlike regulations or subsidies, carbon pricing is economy-wide and lets the market and consumers, rather than government, determine the best ways to decarbonize. ”**

# 2. ECONOMY-WIDE

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Regulations and subsidies are by their nature sector or product specific. To cover the entire economy, we would need separate regulations for every sector or product. Even then, a significant part of the economy would go untouched. For instance, the centerpiece of the Obama administration climate program, the Clean Power Plan, covered just electricity power generation, which accounts for only about a third of U.S. CO<sub>2</sub> emissions. It also did not cover the carbon that is embedded in the goods we import from other countries, which now makes up more than 10 percent of the carbon we consume. Under this regulatory approach, each sector of the economy would have required its own distinct set of regulations and enforcement mechanisms – each with its own delays and inefficiencies.<sup>v</sup>

By contrast, a carbon fee would capture nearly all emissions across the economy in a simple and transparent manner. It would send clear price signals to incentivize businesses and individuals to conserve energy and minimize their carbon footprint. Countless choices go into a modern economy, and a price on carbon will influence each of those choices. Taken together, these many decisions will quickly add up to very significant national emissions reductions. Unlike sector-specific regulations or subsidies, an economy-wide carbon fee can also be paired with a border carbon adjustment, thereby covering the carbon embedded in imported goods. And the carbon fee can gradually increase over time, ensuring it achieves even greater environmental ambition.

### 3. FASTEST WAY TO REDUCE EMISSIONS

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Once enacted, a carbon fee starts working immediately, influencing every economic decision from day one. In fact, a carbon fee sends signals even before day one as businesses and consumers anticipate the change in the relative price of different energy sources and begin to adjust their behavior accordingly. And it never stops working. The enactment of a carbon fee sets in motion an unending process that steers consumer spending and business investment toward cleaner technologies and reduced carbon emissions. This process begins with almost instant energy conservation, then moves to energy substitution and culminates with technological innovation and the deployment of low and zero-carbon alternatives across the economy.

All of this can be accomplished with a single piece of legislation that can be passed and implemented swiftly. By contrast, regulations require many separate and time-consuming rulemaking processes, which are subject to frequent court challenges. It can take years to finalize and implement regulations, and even then, as we have seen, they can be reversed by the next administration. Similarly, it can take years to complete large-scale public investment projects. No matter how well planned, major government investment programs inevitably encounter administrative obstacles and delays: gaps in budget authorization, lengthy permitting protocols and extensive review processes. Bypassing all that, a carbon fee would deliver much faster emissions reductions.

**“A revenue-neutral carbon fee reduces emissions without growing the size of government. It would “finance” the transition to a low-carbon future by leveraging the vast resources of the private sector for innovation and investment.**

### 4. SELF-FINANCING

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Climate regulations and large-scale public investment programs typically come with high price tags, raising difficult questions over how to pay for them and setting off predictable partisan debates over the size of government. For example, the climate proposals recently put forth by leading Democratic presidential candidates range in cost from \$2 trillion over the next decade (Biden), to \$3 trillion (Warren), to over \$16 trillion (Sanders).<sup>vi</sup> Higher taxes alone could not finance this spending increase, meaning that government debt would increase far into the future. Heavy reliance on regulations would also entail other costs: they burden businesses and drive capital to less optimal uses. That in turn would slow economic growth, reducing government revenues and business profits.

By contrast, a gradually rising carbon fee is self-financing and becomes revenue neutral as long as the proceeds are returned to the American people as dividends or through a reduction in other taxes. A carbon fee is the fiscally responsible choice because it would not expand the size of government. Rather, it would “finance” the transition to a low-carbon future by assessing a fee on emissions, encouraging widespread conservation and leveraging the vast resources of the private sector for innovation and investment. If solving climate change requires higher taxes and deficits – which are unpopular – its odds of political success are greatly diminished. By avoiding these pitfalls, a revenue-neutral carbon fee opens the door to bipartisan legislation.

## 5. ENABLES CARBON DIVIDENDS

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Carbon pricing, regulations and subsidies do share one thing in common: they all raise the relative prices of carbon-based fuels. Yet carbon pricing is the only approach that generates revenues that can be returned directly to the American people to offset those higher prices. By contrast, regulations and subsidies impose higher costs or taxes without offsetting them with economic benefits – hardly a winning political combination or one the American public is likely to view as appealing or fair. The answer is to return all proceeds from a national carbon fee to U.S. citizens through quarterly “carbon dividend” checks, as proposed by the Baker Shultz Plan. The vast majority of American families would win financially under this approach by receiving more in carbon dividends than they pay in increased energy costs.<sup>vii</sup>

A carbon dividends plan would align, for the first time, the economic interests of ordinary Americans with climate progress. It also would create a positive feedback loop: the higher the carbon price, the lower the emissions and the higher the dividends. The popularity of the dividends concept has long been demonstrated in Alaska. The Alaska Permanent Fund, enacted in 1976 by a Republican governor in a Republican state and funded through resource extraction, provides an annual dividend to all state residents and remains deeply popular. Likewise, the popularity of carbon dividends is borne out by numerous public opinion polls.<sup>viii</sup> It is a gamechanger that is uniquely suited to building and sustaining the high level of political support needed to hasten the transition to a zero-carbon economy.

**“A carbon dividends plan would create a positive feedback loop: the higher the carbon price, the lower the emissions and the higher the dividends. This empowers the American people to solve climate change on their own terms.”**

## 6. EMPOWERS THE AMERICAN PEOPLE

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A carbon fee – and especially one accompanied by dividends – empowers the American people to solve climate change on their own terms. It is transparent and easily understood, leaving decisions over energy choices to consumers and businesses. The fee would increase gradually, allowing people time to adjust their habits at their own pace. It incentivizes rather than imposes conservation. By contrast, regulations often take away people’s decision-making power, handing it to far-away bureaucrats who are often unresponsive to their concerns. Regulations can also leave ordinary Americans in the dark as to how new rules or mandates will affect them or their choices. Not surprisingly, regulations tend to encounter popular resistance and seemingly endless legal challenges.

Americans want to make our world cleaner – but not at the expense of their values, financial wellbeing or sense of control over their lives. Approaches that restrict individual choice, punish businesses and families or create an unlevel playing field don’t accord with American notions of freedom, fairness or personal responsibility. By contrast, a carbon fee promotes these values by remedying a well-known market failure. To most Americans, charging energy companies for their emissions seems just and sensible – particularly if the fee is applied uniformly across the economy. Paired with carbon dividends, a carbon fee is also equitable because it rewards everyone the same for reducing their emissions. In this sense, it is a truly American solution.

## 7. JUSTIFIES REGULATORY STREAMLINING

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American industry is increasingly calling for a national climate solution and leading by example. What businesses most want is a federal policy that marries environmental ambition with regulatory predictability. Unfortunately, they are now getting the opposite: greater regulatory uncertainty at the federal level, leading to a growing patchwork of state and local policies that impose large compliance costs, often locking companies into inefficient business practices and choices. This not only ties businesses' hands but generates uncertainty that complicates and delays investment decisions. Regulations and subsidies also create an unlevel playing field, as bigger businesses have more resources to cover compliance costs and navigate the regulatory process.

Businesses, like economists, far prefer the certainty and administrative simplicity of an economy-wide carbon fee over cumbersome regulations. The former offers businesses the flexibility to reduce emissions in the most economical manner and the incentives to make long-term investments in clean energy technologies. This warrants a “grand bargain”: trading a meaningful and rising carbon price for the elimination of current and future carbon regulations that are less cost-effective.<sup>ix</sup> A sufficiently robust carbon fee would justify the elimination of all federal stationary source carbon regulations. Combining a carbon fee with regulatory simplification, as the Baker Shultz Carbon Dividends Plan proposes, would be a win-win, leading to greater emissions reductions, economic dynamism and job creation.

**“A meaningful and rising carbon fee justifies eliminating less-efficient carbon regulations, giving companies the predictability and flexibility they need to innovate and make long-term investments in low-carbon technologies.”**

## 8. UNLOCKS INNOVATION

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Innovation is the key to solving climate change. A carbon fee is by far the most powerful tool to unleash the innovative power of American business toward a low-carbon future and position the United States to lead the global clean-tech revolution.<sup>x</sup> By making it profitable to avoid a ton of carbon emissions, it will incentivize businesses across the economy to pioneer new clean industrial methods and energy sources. Once a technology has proven its commercial viability, a carbon fee will ensure its wide and rapid deployment, greatly multiplying its climate benefits. This will help create a low-carbon pathway not just for the U.S. but also for the newly industrializing world, where energy demand and hence the risk of greater greenhouse gas emissions will increase the most in the coming decades.

Government R&D is of course useful in establishing a scientific foundation for technological innovation, and targeted subsidies can accelerate the pace of innovation. But it is innovation at the firm level that is essential for bringing new technologies to market and lowering the cost of low-carbon energy sources. That is why putting a price on carbon is so essential to the innovation process and why energy companies that seek to innovate are so supportive of an escalating carbon fee. Unlike reliance on subsidies, a carbon fee would turbocharge the race to develop and commercialize new clean technologies without increasing the size of government or favoring any one solution. It would also provide far greater certainty for companies seeking to invest scarce resources in clean-tech solutions.

## 9. TECHNOLOGY-NEUTRAL

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Regulations and subsidies hand decisions about energy use and technology choice to government bureaucrats and regulators. Under this approach, the government picks winners and losers, often regardless of cost, thereby restricting both consumer choice and business decisions. Regulations and subsidies also open the door to political favoritism. Inevitably, this disrupts the efficient allocation of capital and human resources across the economy. It also presumes that we are able to accurately anticipate the most promising new technologies, which history has shown is frequently not the case. As a result, any climate strategy resting primarily on regulations and subsidies will increase the cost and duration of our transition to a low-carbon economy.

Carbon pricing starts from the opposite premise: that climate policy should be technology-neutral and that markets are superior in determining the lowest-cost paths and most promising technologies to decarbonize. Any number of nascent low-carbon technologies – from direct air capture, to nuclear fusion, to ultra-deep geothermal, to ones we haven’t even dreamed of – could prove revolutionary. These technologies may have benefited early on from government R&D. But when it comes to their commercial application, how is our government to know which to bet on? A carbon fee answers this question by harnessing the invisible hand of the market without favoring any one solution. In this way, it provides a blank page for American innovators to write the next chapter of the global energy story.

**“A national carbon fee is uniquely suited to be paired with a border carbon adjustment, which will protect and in many cases enhance the competitiveness of American companies.”**

## 10. ENHANCES COMPETITIVENESS

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The current rules of global trade subsidize dirty manufacturing overseas because many of our trading partners have laxer environmental standards. An optimal U.S. climate policy would reverse these incentives while protecting or enhancing the competitiveness of American companies. The best vehicle to accomplish these goals is a border carbon adjustment (BCA). But to work effectively and be WTO-compliant, a BCA requires a domestic carbon price, which can then be extended to cover energy-intensive traded goods.<sup>xi</sup> By contrast, reliance on regulations or subsidies prevents the application of a BCA in a WTO-compatible manner. Regulations also add to the cost of doing business for U.S.-based companies and can therefore harm competitiveness.

A well-designed border carbon adjustment will prevent carbon leakage, level the playing field and enhance the competitiveness of more carbon-efficient U.S. firms, thereby encouraging business support for national climate action. Under this system, the U.S. will apply its domestic carbon price to carbon-intensive imports and rebate fees paid on carbon-intensive exports. A BCA can be designed to satisfy the WTO’s non-discriminatory and most-favored nation principles.<sup>xii</sup> The combination of a carbon fee and a BCA makes for a very effective competitiveness strategy: the fee will spur efficiency and innovation to keep America at the forefront of clean technologies while a BCA will reward U.S.-based companies that are more carbon efficient than their global counterparts.



## 11. PUTS AMERICA IN THE GLOBAL DRIVER'S SEAT

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Climate change is a global problem that will require all major countries to do their share in reducing emissions. American reductions will be meaningless if China and India, which together now account for more than 30 percent of the world's carbon emissions, don't do their part.<sup>xiii</sup> A carbon fee, combined with a border carbon adjustment, offers the best way for the United States to push other nations toward serious climate action and prevent them from free riding. By including traded goods in the scope of our own carbon pricing, we can encourage greater climate ambition globally. Implementing such a system unilaterally will put America in the driver's seat of global climate policy, allowing us to shape the international rules governing trade, carbon pricing and climate cooperation.

From this position of strength, the United States can develop an effective diplomatic strategy, based on its first-mover advantage in adopting a carbon fee with a border carbon adjustment. The next step in this strategy would be to encourage our closest trading partners in Europe and North America – who have already expressed interest in border carbon adjustments – to join us in forming carbon customs unions around a common carbon price and trade policy regarding emissions. The formation of these carbon customs unions would give the United States and its climate allies the market leverage needed to encourage China, India and other major economies to increase their climate ambition. Otherwise, their energy-intensive exports would be penalized at our borders.

**“ Our carbon dividends plan paves the way for a bipartisan climate breakthrough because it offers all sides in the debate a significant victory. ”**

## 12. PROMOTES BIPARTISANSHIP

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Some issues are so important that they should transcend partisan politics. Climate change, by its very nature, is a non-partisan problem. Any viable solution must command broad bipartisan support in order to pass and to last. A climate policy based on regulations fails this test because it will unnecessarily burden the economy, run afoul of the conservative philosophy of limited government and invite frequent legal challenges. Likewise, a climate policy relying primarily on large-scale government investment and subsidies fails this test because it will be expensive, slow to implement and require the government to pick winners and losers. A well-designed carbon fee is the best candidate for a bipartisan climate breakthrough because it offers all sides in the climate debate a significant victory.

Particularly when married with carbon dividends, regulatory streamlining and a border carbon adjustment, a national carbon fee provides the most politically viable way forward. Already, major corporations from a wide range of industries, top environmental groups and opinion leaders and economists from across the ideological spectrum have endorsed the carbon dividends framework because it offers a sensible solution that is pro-environment, pro-business and pro-American worker.<sup>xiv</sup> Recent polling by Luntz Global found that voters favor the Council's Baker Shultz Carbon Dividends Plan by a 4-1 margin, with support exceeding 6-1 among Republican voters under 40.<sup>xv</sup> No other climate policy has united such diverse stakeholders or holds such strong bipartisan appeal.

## ENDNOTES

- i. <https://www.clcouncil.org/economists-statement/>
- ii. Author calculations based on “The Cost of Reducing Greenhouse Gas Emissions” from Kenneth Gillingham and James Stock in the *Journal of Economic Perspectives* (Volume 32, No 4, Fall 2018).
- iii. For example, Hafstead, Marc. “Analysis of Alternative Carbon Tax Price Paths for the Climate Leadership Council (CLC) Carbon Dividends Plan,” *Resources for the Future Issue Brief 18-07*. June 2018. Updated March 2019.
- iv. Bailey, David, and Greg Bertelsen. *A Winning Trade*, Climate Leadership Council. June 2018.
- v. Moran, Daniel, Ali Hasanbeigi, and Cecilia Springer. *The Carbon Loophole in Climate Policy*, KGM & Associates, Global Efficiency Intelligence, and ClimateWorks Foundation. August 2018.
- vi. <https://eelp.law.harvard.edu/2019/09/in-which-we-compare-democratic-presidential-candidates-climate-plans/>
- vii. Horowitz, John, Julie-Anne Cronin, Hannah Hawkins, Laura Konda, and Alex Yuskavage. *Methodology for Analyzing a Carbon Tax*. Working paper no. 115. Office of Tax Analysis, US Department of the Treasury. January 2017.
- viii. See, for instance, August 2018 polling conducted by Yale and GMU: <https://secureservercdn.net/198.71.233.9/6ea.d28.myftpupload.com/media/YaleGMU-Poll-October-2018.pdf>
- ix. See, for example, Justin Gundlach, Ron Minsk, and Noah Kaufman, *Interactions between a Federal Carbon Tax and Other Climate Policies*. Columbia University Center on Global Energy Policy. March 6, 2019. Alternatively, Roberton C Williams III, *How to Change U.S. Climate Policy after There is a Price on Carbon*. The Hamilton Project. October 23, 2019.
- x. Kennedy, Joe. *How Induced Innovation Lowers the Cost of a Carbon Tax*, Information Technology & Innovation Foundation. June 25, 2018.
- xi. Morris, Adele. *Making Border Carbon Adjustments Work in Law and Practice*. Tax Policy Center. July 2018.
- xii. Flannery, Brian, Jennifer Hillman, Jan Mares, and Matthew Porterfield. *Framework Proposal for a U.S. Upstream Greenhouse Gas Tax with WTO-Compliant Border Adjustments*. Resources for the Future. March 2018. Updated October 2018.
- xiii. Muntean, M., D. Guizzardi, E. Schaaf, M. Crippa, E. Solazzo, J.G.J. Olivier, E. Vignati. *Fossil CO2 emissions of all world countries - 2018 Report*. EUR 29433 EN. Publications Office of the European Union, Luxembourg. 2018.
- xiv. For list of endorsers see: <https://www.clcouncil.org/founding-members/>
- xv. Luntz Global conducted their polling in May 2019; see full results at: <https://secureservercdn.net/198.71.233.9/6ea.d28.myftpupload.com/media/Luntz-Carbon-Dividends-Polling-May-20-2019-FINAL.pdf>

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## **ABOUT THE CLIMATE LEADERSHIP COUNCIL**

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The Climate Leadership Council is an international research and advocacy organization founded in collaboration with a who's who of business, opinion and environmental leaders to promote a carbon dividends framework as the most cost-effective, equitable and politically-viable climate solution.

## **THE FOUR PILLARS OF THE BAKER SHULTZ CARBON DIVIDENDS PLAN**

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- 1. A GRADUALLY RISING CARBON FEE**
- 2. CARBON DIVIDENDS FOR ALL AMERICANS**
- 3. SIGNIFICANT REGULATORY SIMPLIFICATION**
- 4. BORDER CARBON ADJUSTMENT**

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