McNamara
8/10/17
#2

Arkansas Citizens' Climate Lobby

Promoting the Political Will for a Livable World

Carbon Dividends Policy

Creating Jobs, Growing the Economy,
Improving Health & Reducing Carbon Emissions

Prepared for

Arkansas Alternative Energy Commission

August 2017

Arkansas
Citizens' Climate Lobby

3274 N Lee Avenue I Fayetteville, AR 72703 I www.arkccl.org I info@arkccl.org

CREATING THE POLITICAL WILL FOR A LIVABLE WORLD

10 August 2017

TO: Arkansas Alternative Energy Commissioners

On behalf of the Arkansans Citizens' Climate Lobby Conference I want to thank you for the opportunity to present information on carbon pricing and dividend policies. These can create jobs, spur economic growth and incentivize alternative energy.

Contained herein are several items we hope you will have the time to review. This information provides documentation about how carbon pricing can benefit the economy while also tackling climate disruption.

1. Arkansas Businesses Supporting Sustainability & Climate Action
2. Executive Summary: *The Economic, Demographic, Fiscal and Emissions Implications of a Carbon Fee in Arkansas,* REMI (Regional Economic Models, Inc.), Washington, DC.
3. *Main Take-aways of the Arkansas REMI study*
4. *The Conservative Case for Carbon Dividends*, Climate Leadership Council
5. Opinion Poll: Arkansas's Views on Climate Change

Thank you for your continued service to Arkansas.

Sincerely,

Christopher McNamara,
Arkansas State Coordinator, Citizens' Climate Lobby

Citizens' Climate Lobby

The Business Case for Climate Action in Arkansas

Businesses across the nation know addressing climate change is good for their bottom line and necessary for long term economic stability. Within the last few days, more than 900 corporations and institutional investors reaffirmed their commitment to the Paris Climate Accord and de-carbonization.[1]

Fortune 500 companies are seizing on sustainable practices that increase efficiencies and save money. Industries are developing disruptive technologies that create new markets and corporate leaders are committing to science-based targets to reduce greenhouse gas emissions- All in an effort to keep global temperatures from rising more than 2 degrees celsius[2].

Among these businesses are many of Arkansas' own largest employers, eg. Walmart and Tyson. In Arkansas, businesses supporting climate action, a carbon tax, or with a commitment to reducing greenhouse gases include:

Walmart	**Union Pacific Railroad Comp.**	**At&T**	**Wells Fargo**
Tyson	**BP Gas**	**Verizon**	**Lowes**
J.B. Hunt	**Exxon Mobil**	**The Kroger Company**	**UPS**
Starbucks	**General Mills**	**Entergy**	**Georgia-Pacific**
USA Truck	**FedEx**	**Dillard's**	**Gap**

These companies bring in a total of over **$1.7 trillion** in revenue and employ over **75,000 Arkansans**.

On April 19th, Walmart launched **Project Gigaton**, an effort to reduce a gigaton of emissions in its supply chain by 2030[3]

[1]Open letter to the international community and parties to the Paris Agreement from U.S. state, local, and business leaders http://wearestillin.com/
[2] Walmart's Science Based Target: A Game Changer http://sciencebasedtargets.org/2016/11/04/walmarts-science-based-target-a-game-changer/
[3] Walmart Launches Project Gigaton to Reduce Emissions in Company's Supply Chain http://news.walmart.com/2017/04/19/walmart-launches-project-gigaton-to-reduce-emissions-in-companys-supply-chain

"We are proud of the improvements we've made in reducing our own emissions, but we aim to do more. That's why we're working with our suppliers and others on Project Gigaton," -Kathleen McLaughlin, senior vice president and chief sustainability officer for Walmart

The clean energy economy in Arkansas already employs 25,000 jobs in Arkansas and has significant room for growth.[4] Entergy Arkansas and NextEra Energy Resources recently broke ground on a 81 megawatt solar array that will employ 200-300 employees during construction and contribute nearly $8 million in taxes and will benefit Arkansas electric customers by providing $25 million in estimated savings .[5]

"This project will bring good jobs, tax benefits and affordable, renewable energy to the state for decades to come." -Armando Pimentel, president and CEO of NextEra Energy Resources.

Nearby, Aerojet Rocketdyne's (the region's largest employer) 12-megawatt facility allowed the company transfer 220 manufacturing jobs from California to Camden, AR.[6]

Plains and Eastern Clean Line construction projects across Arkansas will be add thousands of jobs to the state and professions such as Wind Turbine Technician, the fastest growing job in the US.

There is an economic incentive for addressing climate change. Businesses are taking the lead but need the support of policy for the future growth. Our Carbon Fee and Dividend policy capitalizes on the free market to help businesses to innovate toward a sustainable future, stable climate and thriving 21st century economy.

We look forward to your leadership for current and future Arkansans.

The Citizen's Climate Lobby of Arkansas

---

4 http://arkansasadvancedenergy.com/

5 Entergy jumps into sun-fueled power generation with 'Stuttgart Solar' project http://talkbusiness.net/2017/05/entergy-jumps-into-sun-fueled-power-generation-with-stuttgart-solar-project/

6 The team that blew the lid off the solar market in Arkansas and how they did it https://sepapower.org/knowledge/solar-market-in-arkansas/

Arkansas Citizens' Climate Lobby

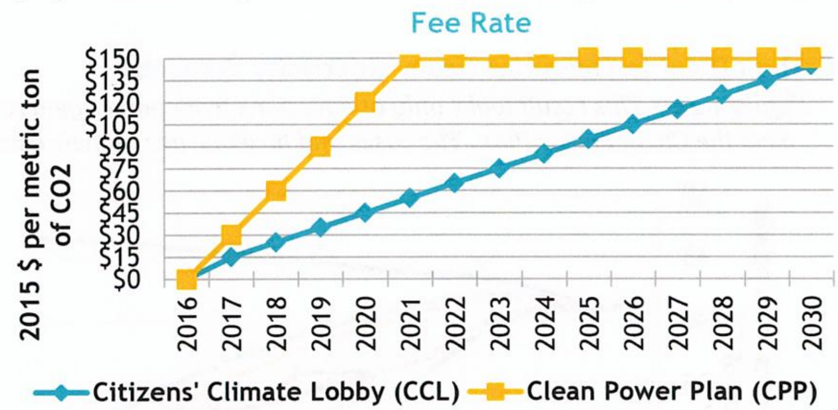
REMI

The Economic, Demographic, Fiscal, and Emissions Implications of a Carbon Fee in Arkansas

This study is focused on **how a carbon fee in Arkansas would help it comply with the strictures of the EPA's Clean Power Plan (CPP) to reduce the carbon dioxide emitted from existing power plants.** It examines the potential economic, demographic, fiscal, and emissions impact of a fee on carbon dioxide in Arkansas.

The final rule has explicitly allowed a carbon fee as a means of complying with the Clean Power Plan (p. 899). If states do decide to adopt a carbon fee as their compliance mechanism, they will also need to put forward a back-up option in case their primary plan does not result in the promised emissions reductions... A carbon fee could match or even exceed the EPA's emission reduction targets as supported by data from the Energy Information Agency (pp. ES-5, MT-34).

In order to perform a sensitivity analysis and cap the theoretically unlimited number of rates and scenarios, we have focused on two rate algorithms. The first is the rates favored by CCL in their proposed national legislation. The rate begins at **$15 per metric ton** of carbon dioxide in the first year followed by a gradual **escalation of $10 per year** through at least the 2030s. It culminates at $145 per metric ton in 2030 here (the sunset of this analysis). The second line is for a rapid escalation of the carbon fee, starting at **$30 per ton and $30 per year thereafter**, until it plateaus at $150 per ton in 2021. Its figures derive from internal testing on what rates of consumer carbon fees in the electricity sector **would lead to full compliance with all the CPP interim goals in the state of Arkansas.**

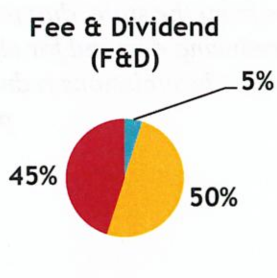


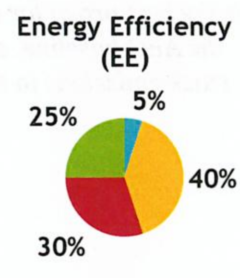
*Clean Power Plan (CPP) signifies fee rate $30/ton with $30/escalation rate which complies with all Clean Power Plan interim goals.

The revenues from the carbon fee simulations examined a dividend system to households and employers as well as a second choice to send 25% of the funds to energy efficiency programs in the early years to help with CPP compliance. **All cases increase the total number of jobs and the size of the economy in Arkansas—mostly by reducing imported fossil fuels and through the encouragement of a more labor-intensive industry mixture and added income to households.** The carbon fee also reduces emissions by discouraging the consumption of fossil fuels. All scenarios under examination comply with the goals of the CPP by 2030. and one of them, **below in lime green**, manages all the intermediate goals.

Revenue Recycling

- **Administration and Overhead** – An assumed 5% cost to the state for the collection of the fee and the redistribution of the funds back into the state economy
- **Rebates to Households** – Monthly checks or direct deposits to individuals and households in Arkansas to rebate revenues back to the public
- **Rebates to Employers** – Similar to the rebate to households though paid to employers in the state (either public sector or private sector, nonprofit and for profit alike) either as a monthly rebate check or through the state tax system
- **Energy Efficiency Programs** – Funds appropriated by the state towards various energy efficiency programs to further reduce energy demand and emissions





The F&D case always follows the distribution on the left. The EE case follows the distribution of the funds on the right from **2017 to 2021 before transitioning into the distribution** from the F&D case from 2022 forward—four total of 2x2 (rates, recycling).

Email cclofark@gmail.com for more information

Fee Coverage

	F&D	EE
CCL	Case (1)	Case (2)
CPP	Case (3)	Case (4)

The **rates** (on the **y-axis**, the row headers) and the **revenue recycling options** (on the **x-axis**, the column headers) combined create four cases. Their numbers are 1, 2, 3, and 4 above, and the colors (from blue to green) stay consistent through the rest of this report.

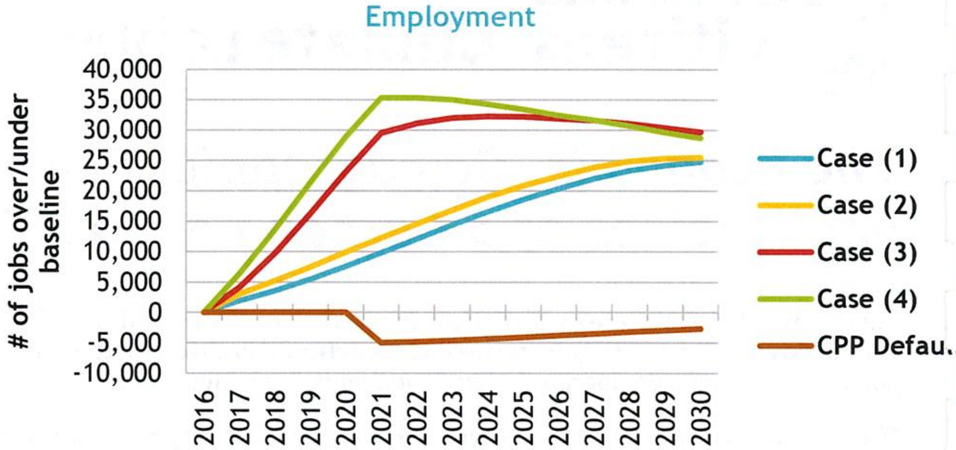
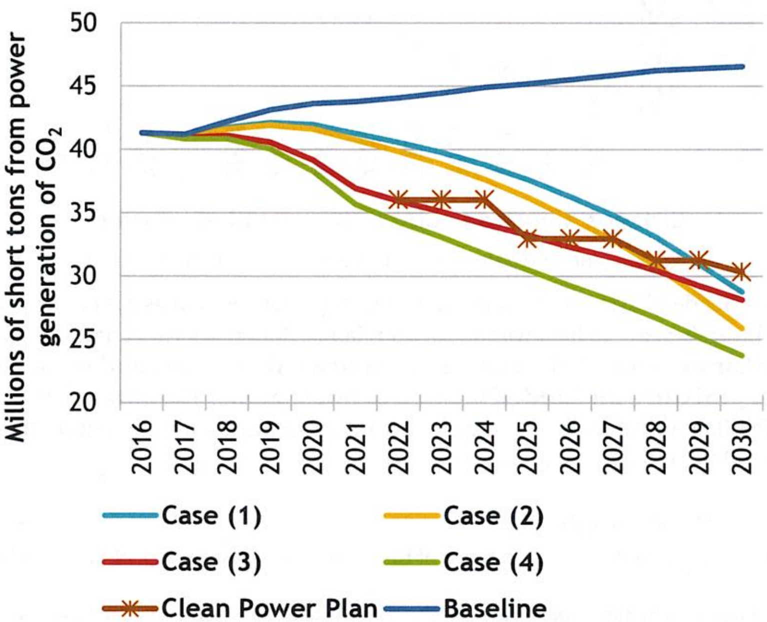


Figure 1.1 – All carbon fee cases (the blue down to green, not including brown) show a net increase in the number of jobs in the state. The default 10% increase in electricity prices has a slightly negative influence on the Arkansas state economy.

Carbon Dioxide Emissions (from electricity demand)

Figure 1.24 – This result looks only at emissions from power generation implied by electricity demand in the state to meet the Clean Power Plan. The cases and baseline are in their usual colors while the CPP limits are in brown with asterisks. For the mass-based target, the final rule for Arkansas requires the targets graphed on the brown line.[1] Absent any policy on carbon dioxide emissions, Arkansas follows the general curve of the WSC region again in this sector. All policy designs cause a reduction in emissions, though not all comply with the intermediate requirements of the CPP. Case (1) and case (2) comply with the final goals in 2030, reducing emissions below 30.3 million short tons in the last year. Case (3) comes close to hitting all of the intermediate targets, though it does exceed the goal for 2025 without any ramping of the goals between 2024 and 2027. The green line for case (4), conversely, does meet all the intermediate goals and the final mass-based rule under the CPP for the Natural State. The above presumes that demand for electricity in the Arkansas region is the best proxy for emissions from the state, that price elasticity is an adequate tool for the prediction of demand from the AEO baseline, and that reducing demand for electricity from Arkansas' households and businesses would reduce stack emissions in this manner. The emissions reductions here would be considerable but could be the topic for future power modeling.



[1] <http://www3.epa.gov/airquality/cpptoolbox/arkansas.pdf>

Main Take Aways

Economic
- 20,000 to 30,000 additional jobs over the baseline scenario
- Increased GSP and real disposable personal income (RDPI)

Emissions
- Reduction of 20 to 30 million metric tons per year total
- Power emissions approach or are below CPP regulations

Budgetary
- $500 million to $1 billion in the first year, $4 billion long-term
- Monthly rebate to households and employers over $200 per month

Demographic
- The long-term population of the state increases with fee
- Attracted by stronger labor market and availability of dividends

- <u>A strong economy and environmental quality are not mutually exclusive functions</u>
  - In fact, when understood as "mundane" fiscal policy, environmental measures might have some positive effects across the economy
    - **Reduced fossil fuel imports**
    - **Encouragement of localized, labor-intensive industries**

The Arkansas chapter of Citizens Climate Lobby (CCL) engaged with Regional Economic Models, Inc. (REMI) in Washington, DC to perform this work.

Email cclofark@gmail.com for more information

CLIMATE
LEADERSHIP
COUNCIL

THE CONSERVATIVE CASE FOR CARBON DIVIDENDS

How a new climate strategy can strengthen our economy, reduce regulation, help working-class Americans, shrink government & promote national security

James A. Baker, III
Martin Feldstein
Ted Halstead
N. Gregory Mankiw
Henry M. Paulson, Jr.
George P. Shultz
Thomas Stephenson
Rob Walton

February 2017

ABOUT THE AUTHORS

JAMES A. BAKER, III, served as Secretary of State under President George H.W. Bush, Secretary of the Treasury under President Reagan and White House chief of staff under both. He is a senior partner in the law firm of Baker Botts.

HENRY M. PAULSON, JR., served as Secretary of the Treasury under President George W. Bush. Previously, he served as chairman and chief executive officer at Goldman Sachs. He is the founder and chairman of the Paulson Institute.

MARTIN FELDSTEIN served as Chairman of the President's Council of Economic Advisers from 1982 to 1984 under President Reagan. He is the George F. Baker Professor of Economics at Harvard University and President Emeritus of the NBER.

GEORGE P. SHULTZ served as Secretary of State under President Ronald Reagan, and as Secretary of Treasury and Labor under President Nixon. He is the Thomas W. and Susan B. Ford Distinguished Fellow at the Hoover Institution.

TED HALSTEAD is the founder, President & CEO of the Climate Leadership Council. Previously, he founded New America, a leading public policy think tank. He is co-author of *The Radical Center: The Future Of American Politics.*

THOMAS STEPHENSON is a partner at Sequoia Capital, a venture capital firm based in Silicon Valley. Stephenson previously served as the United States Ambassador to Portugal from 2007 to 2009 under President George W. Bush.

N. GREGORY MANKIW served as Chairman of the President's Council of Economic Advisers from 2003 to 2005 under President George W. Bush. He is the Robert M. Beren Professor of Economics at Harvard University.

ROB WALTON served as chairman of the board of Walmart, the world's largest retailer and employer, from 1992 to 2015. He is currently Chairman of the Executive Committee of Conservation International.

ABOUT THE CLIMATE LEADERSHIP COUNCIL

The Climate Leadership Council is an international research and advocacy organization whose mission is to mobilize global opinion leaders around the most effective, popular and equitable climate solutions. As a central part of this mission, the Council develops and promotes new policy frameworks based on carbon dividends for each of the largest greenhouse gas emitting regions. Currently active in Washington and London, the Council will expand to Berlin, Beijing and New Delhi next. Find out more at www.clcouncil.org.

THE NEED FOR A CONSERVATIVE CLIMATE SOLUTION

Mounting evidence of climate change is growing too strong to ignore. While the extent to which climate change is due to man-made causes can be questioned, the risks associated with future warming are too big and should be hedged. At least we need an insurance policy. For too long, many Republicans have looked the other way, forfeiting the policy initiative to those who favor growth-inhibiting command-and-control regulations, and fostering a needless climate divide between the GOP and the scientific, business, military, religious, civic and international mainstream.

Now that the Republican Party controls the White House and Congress, it has the opportunity and responsibility to promote a climate plan that showcases the full power of enduring conservative convictions. Any climate solution should be based on sound economic analysis and embody the principles of free markets and limited government. As this paper argues, such a plan could strengthen our economy, benefit working-class Americans, reduce regulations, protect our natural heritage and consolidate a new era of Republican leadership. These benefits accrue regardless of one's views on climate science.

THE FOUR PILLARS OF A CARBON DIVIDENDS PLAN

1. A GRADUALLY INCREASING CARBON TAX

The first pillar of a carbon dividends plan is a gradually increasing tax on carbon dioxide emissions, to be implemented at the refinery or the first point where fossil fuels enter the economy, meaning the mine, well or port. Economists are nearly unanimous in their belief that a carbon tax is the most efficient and effective way to reduce carbon emissions. A sensible carbon tax might begin at $40 a ton and increase steadily over time, sending a powerful signal to businesses and consumers, while generating revenue to reward Americans for decreasing their collective carbon footprint.

2. CARBON DIVIDENDS FOR ALL AMERICANS

All the proceeds from this carbon tax would be returned to the American people on an equal and monthly basis via dividend checks, direct deposits or contributions to their individual retirement accounts. In the example above, a family of four would receive approximately $2,000 in carbon dividend payments in the first year. This amount would grow over time as the carbon tax rate increases, creating a positive feedback loop: the more the climate is protected, the greater the individual dividend payments to all Americans. The Social Security Administration should administer this program, with eligibility for dividends based on a valid social security number.

3. BORDER CARBON ADJUSTMENTS

Border adjustments for the carbon content of both imports and exports would protect American competitiveness and punish free-riding by other nations, encouraging them to adopt carbon pricing of their own. Exports to countries without comparable carbon pricing systems would receive rebates for carbon taxes paid, while imports from such countries would face fees on the carbon content of their products. Proceeds from such fees would benefit the American people in the form of larger carbon dividends. Other trade remedies could also be used to encourage our trading partners to adopt comparable carbon pricing.

4. SIGNIFICANT REGULATORY ROLLBACK

The final pillar is the elimination of regulations that are no longer necessary upon the enactment of a rising carbon tax whose longevity is secured by the popularity of dividends. Much of the EPA's regulatory authority over carbon dioxide emissions would be phased out, including an outright repeal of the Clean Power Plan. Robust carbon taxes would also make possible an end to federal and state tort liability for emitters. To build and sustain a bipartisan consensus for a regulatory rollback of this magnitude, the initial carbon tax rate should be set to exceed the emissions reductions of current regulations.

HELPING WORKING-CLASS AMERICANS

President Donald J. Trump's electoral victory stems in large part from his ability to speak to the increasing frustration and economic insecurity that many voters feel the political establishment has failed to address. This frustration has found expression in a growing populist sentiment and yearning for fundamental change. A carbon dividends plan responds to these powerful trends.

Relieving Economic Anxiety

Today's economic insecurity is driven by both technological progress and globalization. As such, it does not lend itself to easy answers. A carbon dividends program provides a rare exception: a simple idea that strengthens the economy and elevates the economic prospects of the nation's disaffected. The Department of Treasury estimates that the bottom 70% of Americans would come out ahead under such a program. Carbon dividends would increase the disposable income of the majority of Americans while disproportionately helping those struggling to make ends meet. Yet these dividends are not giveaways; they would be earned based on the good behavior of minimizing our carbon footprints.

Redirecting Populism

Increasingly, voters feel that the American political and economic system is rigged against their interests. Populism threatens the current policy consensus in favor of liberalized trade and investment. The best remedy is to redirect this populist energy in a socially beneficial direction. Carbon dividends can do just that based on a populist rationale: We the People deserve to be compensated when others impose climate risks and emit heat-trapping gases into our shared atmosphere. The new ground rules make intuitive sense: the more one pollutes, the more one pays; the less one pollutes, the more one comes out ahead. This, for once, would tip the economic scales towards the interests of the little guy.

> “ *Carbon dividends would increase the disposable income of the majority of Americans while disproportionately helping those struggling to make ends meet*

STRENGTHENING OUR ECONOMY

Incentivizing Growth & Innovation

An ideal climate strategy would simultaneously reduce carbon emissions and steer America towards a path of more durable economic growth. A carbon dividends plan can do exactly that. A carbon tax would send a powerful market signal that encourages technological innovation and large-scale substitution of existing energy and transportation infrastructures, thereby stimulating new investment. Second, the plan would offer companies, especially those in the energy sector, the predictability they now lack, thus removing one of the most serious impediments to longer-term capital investment. Third, because many regulations would become unnecessary, the plan would give companies the flexibility to reduce emissions in the most efficient way.

> “ *This plan would steer America towards more durable economic growth by encouraging technological innovation and stimulating new investment*

The Immediate Impact of Future Policy

A well-designed carbon dividends plan would further contribute to economic growth through its dynamic effects on consumption and investment. Just as central banks rely on forward guidance to influence future market expectations, if investors know that a carbon tax will increase steadily over time, the stimulatory effect of the final tax rate would be felt almost immediately for infrastructure and utility projects, especially ones that have long-term paybacks. In addition, forward-looking households would have an incentive to borrow to make durable purchases that would reduce their carbon footprint. Congress might even consider allowing individuals to borrow against their future dividend income for certain clearly defined purposes, such as higher education or the purchase of an electric vehicle.

SHRINKING THE SIZE OF GOVERNMENT

Less Government, Less Pollution

In order to separate the consideration of carbon taxes from debates over size of government, most carbon tax proposals are now revenue-neutral. This proposal, however, would go one step further by shrinking the overall size of government and streamlining the regulatory state. Eliminating or phasing out an array of energy-related regulations would reduce government bureaucracy, promote economic growth and free up the financial and personnel resources now allocated to administer and comply with these programs. A gradually increasing carbon tax would also eliminate the rationale for ever more heavy-handed regulations of greenhouse gas emissions in future years.

The Essential Link Between Carbon Taxes, Dividends & Regulatory Relief

For the elimination of heavy-handed climate regulations to withstand the test of time and not prove highly divisive, they must be replaced by a market-based alternative. Our policy is uniquely suited to building bipartisan and public support for a significant regulatory rollback. It is essential that the one-to-one relationship between carbon tax revenue and dividends be maintained as the plan's longevity, popularity and transparency all hinge on this. Allocating carbon tax proceeds to other purposes would undermine popular support for a gradually rising carbon tax and the broader rationale for far-reaching regulatory reductions.

STABILIZING AN UNSTABLE WORLD

Our reliance on fossil fuels contributes to a less stable world, empowers rogue petro-states and makes us vulnerable to a volatile world oil market. Carbon dividends would accelerate the transition to a low-carbon global economy and domestic energy independence. Not only would this help prevent the destabilizing consequences of climate change, it would also reduce the need to protect or seek to influence politically vulnerable oil-producing regions. With our electric grids susceptible to cyber attacks, a transition to cleaner power sources combined with new distributed storage technologies could also strengthen national security. Carbon pricing would also encourage domestic nuclear energy, further promoting climate stability and America's energy independence.

> “ *Many carbon tax proposals are revenue-neutral. This proposal goes one step further by shrinking the overall size of government and streamlining the regulatory state*

CONSOLIDATING CONSERVATIVE LEADERSHIP

A Popular Solution to a Widely Shared Concern

The opposition of many Republicans to meaningfully address climate change reflects poor science and poor economics, and is at odds with the party's own noble tradition of stewardship. A carbon dividends plan could realign the GOP with that longstanding tradition and with popular opinion. Recent polls indicate that 64% of Americans worry a great deal or a fair amount about climate change, while a clear majority of Republicans acknowledge that climate change is occurring. Meanwhile, one telling survey finds that 67% of Americans support a carbon tax with proceeds returned directly to them, including 54% of conservative Republicans.

Appealing to Younger Voters, Latinos & Asians

Concern about climate change is greatest among Americans below the age of 35, Latinos and Asians. And it is, of course, younger voters who hold the key to the future political fortune of either party. Increasingly, climate change is becoming a defining issue for this next generation of Americans, which the GOP ignores at its own peril. Meanwhile Asians and Hispanics – the fastest growing demographic groups – are also deeply concerned about climate change. A carbon dividends plan offers an opportunity to appeal to all three key demographics, while illustrating for them the superiority of market-based solutions.

POLICY FINE PRINT

A carbon tax should increase steadily and predictably over time so that companies and consumers can plan accordingly, and the previously mentioned economic stimulatory effects can be harnessed. At the completion of a five year period, a Blue Ribbon Panel could recommend whether the tax rate should increase further, based on the best climate science available at the time. Provisions must be established for the unbanked to receive their monthly dividend checks, possibly through commercial services such as PayPal or Western Union. The dividend income should be tax-free. Exports by companies in sectors with greater than 5% energy cost in final value should have any carbon taxes rebated on leaving the United States. Finally, non-emissive fossil fuel products (e.g. asphalt for road use) should be exempt, with a refund for any tax previously paid.

> *"With the privilege of controlling all branches of government comes a responsibility to exercise wise leadership on climate policy and promote a solution that showcases the full power of enduring conservative convictions*

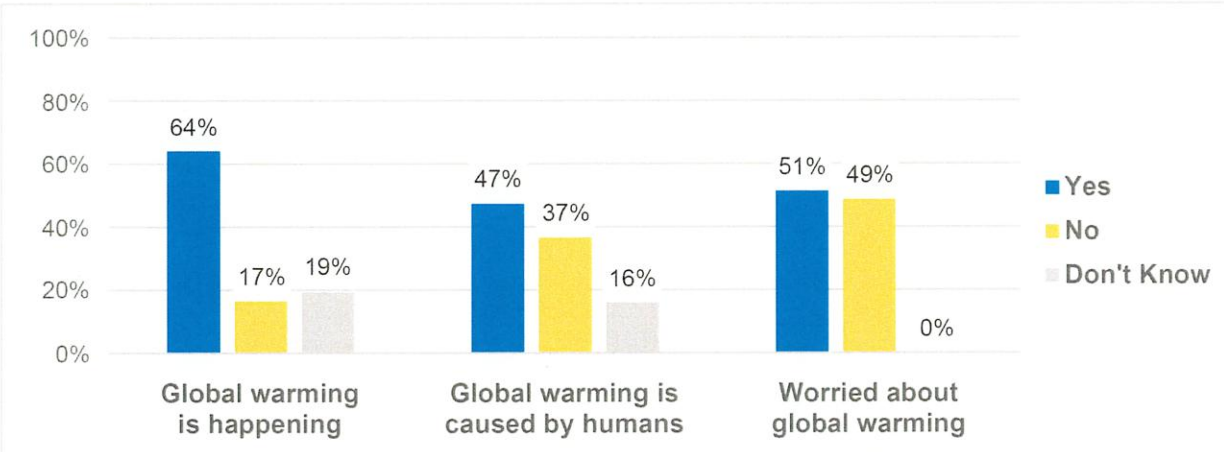
THE IMPERATIVE TO LEAD

With the privilege of controlling all branches of the government comes a responsibility to exercise wise leadership on the defining challenges of our era, including global climate change. It is incumbent upon the GOP to lead the way rather than look the other way. Republicans now have a rare opportunity to set the terms of a lasting market-based climate solution that warrants bipartisan, industry and public support. No less important, this is an opportunity to demonstrate the power of the conservative canon by offering a more effective, equitable and popular climate policy based on free markets, smaller government and dividends for all Americans.

CLIMATE
LEADERSHIP
COUNCIL

Americans Support Action on Climate

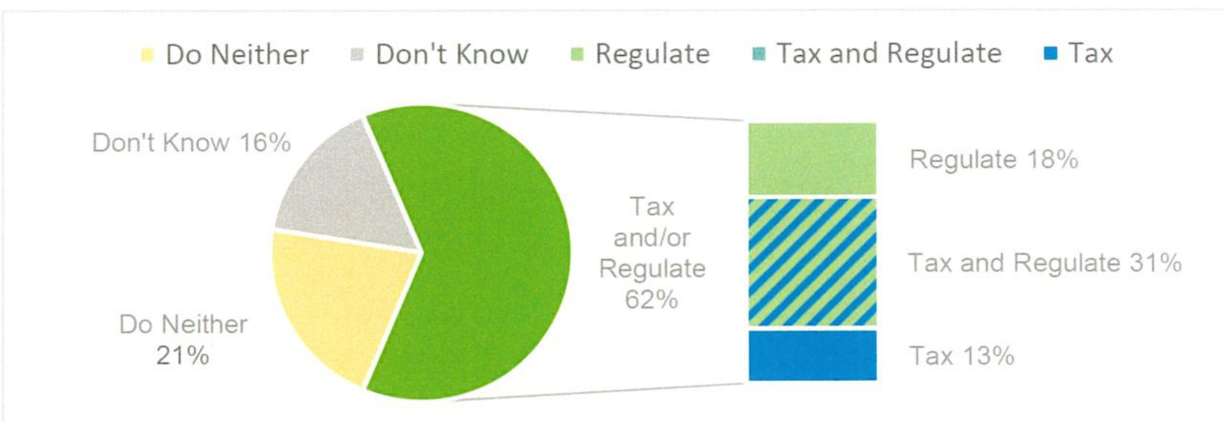
Opinions from Arkansas



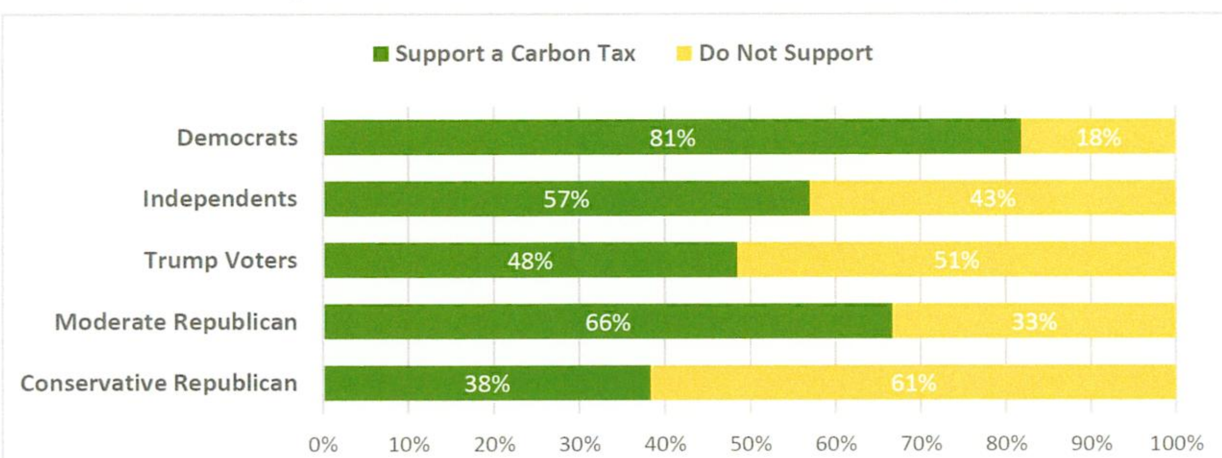
Estimated public opinions for this district/state are based on national polling and modeling from the Yale Project on Climate Change Communication: http://cclusa.org/yalemaps

National Opinions

More than 60% of Trump voters support taxing and/or regulating the global warming pollution



Almost half of Trump voters, and two-thirds of moderate Republicans support a Carbon Tax



National Opinions from Yale Project on Climate Change Communication: http://cclusa.org/yale17

Prepared by Citizens' Climate Lobby - www.citizensclimatelobby.org - 2017