

**TESTIMONY FOR THE RECORD FROM CITIZENS' CLIMATE LOBBY
REGARDING SENATE FINANCE COMMITTEE HEARING ON CLIMATE CHALLENGES**

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Citizens' Climate Lobby (CCL) appreciates the opportunity to submit written testimony to the Senate Finance Committee for the April 27, 2021 hearing on Climate Challenges: The Tax Code's Role in Creating American Jobs, Achieving Energy Independence, and Providing Consumers with Affordable, Clean Energy

Citizens' Climate Lobby is a grassroots organization that trains and supports volunteers to build relationships with their elected representatives in order to influence climate policy. CCL's key purpose is to create political will for climate solutions while empowering individuals to exercise their personal and political power. CCL has over 180,000 supporters nationwide from every state and congressional district.

Summary

Citizens' Climate Lobby encourages Congress to put a price on greenhouse gas emissions as an effective and evidence-based approach to mitigating climate change. Congress has already developed impressive carbon pricing legislation that can quickly reduce greenhouse gas emissions and protect low income Americans including [America's Clean Future Fund of 2021 \(S.685\)](#), [The American Opportunity Carbon Fee Act of 2019](#), [The Climate Action Rebate Act of 2019](#), and [The Energy Innovation and Carbon Dividend Act](#). This last policy is a carbon fee and dividend approach supported by scientists, economists, and thousands of businesses, prominent individuals, faith groups, and local governments from both sides of the political aisle.¹ We support this policy and encourage Congress to pass it because it would

- Create millions of jobs in a clean energy economy
- Act quickly and efficiently to reduce emissions
- Add higher quality jobs in the energy sector
- Increase GDP on a net basis
- Move the U.S. toward energy independence
- Make clean, affordable energy available to Americans
- Protect U.S. businesses in the transition to clean energy
- Encourage global action on emissions reductions
- Dramatically improve our health and save lives
- Achieve emissions reductions without adding to the federal deficit

¹ <https://energyinnovationact.org/supporters-overview/>

Creating Quality American Jobs

Creating Jobs

A carbon price will create more U.S. jobs in the clean energy sector as we transition to a clean energy economy. To provide a few examples, relative to coal, generating energy from wind creates 1.5 times more jobs, from solar thermal creates 2 times more jobs, from photovoltaic solar creates 8 times more jobs, and energy efficiency efforts create 3.5 times more jobs per unit of energy.² Similarly, investing in clean energy generates approximately 3.2 times more U.S. jobs than equivalent spending would generate in fossil fuels.³

A carbon price that returns revenue to citizens will bring job growth in other sectors beyond clean energy as well. British Columbia implemented a carbon price that returned revenues to citizens and demonstrated that over a 6 year period, job gains in labor-intensive sectors like health care outweighed job losses in energy intensive sectors like air travel.⁴ A study of a carbon fee and dividend similar to the Energy Innovation and Carbon Dividend Act showed that the policy would create 2.8 million jobs above baseline over 20 years between clean energy jobs and local jobs in sectors such as healthcare and entertainment.⁵ The clean energy economy provides more job opportunities in both the energy sector and the broader economy.

Quality Jobs

Transitioning to clean energy will not only create more jobs, but will create more quality jobs with higher wages and better benefits. On average in 2018 fossil fuel jobs earned \$25/hr, wind and solar jobs earned \$24/hr, nuclear jobs earned \$46/hr, and jobs that applied to all forms of energy earned \$28/hr.⁶ The median hourly wages for clean energy jobs are 25% higher than the national median wage for all jobs. Further, clean energy jobs are more likely to come with health and retirement benefits than the rest of the private sector. And generally, unionization rates for clean energy jobs are slightly higher than the rest of the private sector.⁷

² [Wei, Max, et al. "Putting Renewables and Energy Efficiency to Work: How Many Jobs Can the Clean Energy Industry Generate in the US?" *Energy Policy*, vol. 38, no. 2, 2010, pp. 919–931.](#)

³ [Pollin, Robert, et al. Department of Economics and Political Economy Research Institute \(PERI\), June 2009, *The Economic Benefits of Investing in Clean Energy*.](#)

⁴ [Yamazaki, Akio. "Jobs and Climate Policy: Evidence from British Columbia's Revenue-Neutral Carbon Tax." *Journal of Environmental Economics and Management*, vol. 83, 25 Apr. 2017, pp. 197–216.](#)

⁵ [Nystrom, Scott, and Patrick Luckow. Regional Economic Models, Inc. \(REMI\) and Synapse Energy Economics, Inc. \(Synapse\), 2014, *The Economic, Climate, Fiscal, Power, and Demographic Impact of a National Fee-and-Dividend Carbon Tax*.](#)

⁶ ["Occupational Employment Statistics." U.S. Bureau of Labor Statistics \(May 2018\).](#)

⁷ [E2, ACORE, and CELI, October 2020, *Clean Jobs, Better Jobs: An Examination of Clean Energy Job Wages and Benefits*.](#)

Energy jobs are naturally transitioning to clean energy jobs as clean energy employment (+6%) grew more than twice the national average (+2.7%) between 2017 and 2019 while employment in natural gas and coal have fallen -5.3% and -7.1% respectively.⁸ A carbon price would accelerate this trend of job creation in a sector that has higher than average wages and higher unionization rates. Many current energy occupations will also continue to thrive in a low-carbon energy environment. These would include installation and maintenance of expanded power grid infrastructure, pipeline installation and maintenance for CO₂ and/or hydrogen pipelines, refinery and process plant construction and operation in biorefineries, and the nuclear power utility workforce.

Achieving Energy Independence

Well designed climate policy can help the U.S. increase energy independence on its path to net-zero emissions. A study of the carbon fee and dividend approach using the Energy Innovation and Carbon Dividend Act of 2019 found that the policy would have virtually no effect on U.S. oil production and relatively small impact on U.S. natural gas production by 2030 while effectively reducing emissions.⁹ This is possible because as U.S. fuel demand decreases as a result of the carbon price, the U.S. sources higher percentages of fuel locally and decreases imports.

Providing Consumers with Affordable, Clean Energy

Moving to Clean Energy

Carbon pricing is an effective way to move our economy toward clean energy sources. Modest carbon prices, as low as \$7/ton by 2020, \$22/ton by 2025, and \$36/ton by 2030 can meet the same greenhouse gas emissions reductions that would be achieved by the regulatory approaches of the Clean Power Plan, Corporate Average Fuel Economy (CAFE) Standards, and Renewable Fuel Standards combined.¹⁰ Reasonable carbon prices can put the U.S. clearly on the path to net-zero by 2050. A carbon price of about \$34 to \$64/ton by 2025 and \$77 to \$124/ton in 2030 will put us on the path to net-zero by 2050.¹¹ The carbon price targets set in the Energy Innovation and Carbon Dividend Act hit the center of these estimates.

Maintaining Affordable Energy

⁸ [E2, ACORE, and CELI, October 2020, *Clean Jobs, Better Jobs: An Examination of Clean Energy Job Wages and Benefits*.](#)

⁹ [Kaufman, Dr. Noah, et al. Columbia Center on Global Energy Policy, 2019, *An Assessment of the Energy Innovation and Carbon Dividend Act*.](#)

¹⁰ [Knittel, Christopher R. MIT Center for Energy and Environmental Policy Research, 2019, Knittel, Christopher R., *Diary of a Wimpy Carbon Tax: Carbon Taxes as Federal Climate Policy*.](#)

¹¹ [Kaufman, Noah, et al. "A Near-Term to Net Zero Alternative to the Social Cost of Carbon for Setting Carbon Prices." *Nature Climate Change*, vol. 10, no. 11, 2020, pp. 1010–1014., doi:10.1038/s41558-020-0880-3.](#)

As the U.S. transitions to a healthier and more sustainable clean energy economy, there will be temporary increases in energy prices for consumers. It is critical to protect low income communities from increasing energy prices as we make this necessary transition. A carbon fee and dividend like the Energy Innovation and Carbon Dividend Act can effectively move the U.S. toward net-zero energy while protecting consumers by returning 100% of the revenue equally to American residents. Under this plan, 61% of households and 68% of individuals in the U.S. end up receiving more than enough in monthly carbon dividends to offset their increased costs. These benefits highly correlate with low income Americans with 97% of the lowest two economic quintiles benefiting or breaking even on increased energy costs.¹²

Preferred by Businesses

Carbon pricing is the preferred climate policy of many businesses. This approach lays out a predictable price for businesses to plan for. A carbon price does not set restrictions on specific businesses or select winners but applies the same incentive to innovate and reduce emissions evenly. See the following notable statements of support for carbon pricing:

- [U.S. Chamber of Commerce](#): “The Chamber supports a market-based approach to accelerate GHG [greenhouse gas] emissions reductions across the U.S. economy. We believe that durable climate policy must be made by Congress, and that it should encourage innovation and investment to ensure significant emissions reductions, while avoiding economic harm for businesses, consumers and disadvantaged communities. This policy should include well designed market mechanisms that are transparent and not distorted by overlapping regulations. U.S. climate policy should recognize the urgent need for action, while maintaining the national and international competitiveness of U.S. industry and ensuring consistency with free enterprise and free trade principles.”
- [Business Roundtable](#): “Business Roundtable believes corporations should lead by example, support sound public policies and drive the innovation needed to address climate change. To this end, the United States should adopt a more comprehensive, coordinated and market-based approach to reduce emissions. This approach must be pursued in a manner that ensures environmental effectiveness while fostering innovation, maintaining U.S. competitiveness, maximizing compliance flexibility and minimizing costs to business and society. International cooperation and diplomacy backed by a broadly supported U.S. policy will be the key to achieving the collective global action required to meet the scope of the challenge and position the U.S. economy for long-term success.”
- [American Petroleum Institute \(API\)](#): “API endorses an economy wide price on carbon, the most impactful policy for emissions reductions, but recognizes the prevalence of ongoing

¹² [Ummel, Kevin. 2020. *Household Impact Study II \(HIS2\) The Impact of a Carbon Fee and Dividend Policy on the Finances of U.S. Households.*](#)

discussions regarding sector-specific policies, including a Clean Energy Standard (CES) focused on the electricity sector. API supports fuel- and technology neutral approaches to addressing emissions in the electricity sector and believes that any CES under consideration should include natural gas and recognize and value the many benefits natural gas provides to an increasingly lower-carbon electricity grid.”

Carbon Border Fee Adjustment

Protecting U.S. Businesses

Carbon prices paired with a carbon border fee adjustment will not disadvantage U.S. business in the world market. A carbon border fee adjustment may be imposed on covered fuels and ‘emissions-intensive trade-exposed’ (EITE) goods¹³ that cross our border in either direction; imported EITE goods from a country without an equivalent carbon price to the U.S. will pay a fee to make up the difference and American-made EITE products exported to such a country will receive a rebate for the carbon fee. These goods include products like steel, aluminum, cement, glass, certain chemicals, and some agricultural products.¹⁴

Carbon border fee adjustments prevent the carbon fee from putting American businesses at a competitive disadvantage in global markets. It will also remove the incentive for businesses to relocate overseas to avoid the carbon fee.

Threats and Opportunities on International Coordination

The United States is currently falling behind as the only developed nation without a national carbon price.^{15,16} China, another influential economy, has launched an emissions trading scheme that lays the groundwork for phasing out carbon emissions.¹⁷ Both the European Union (EU) and Canada – countries that account for a third of our international trade¹⁸ – have enacted carbon prices and are discussing border carbon adjustments of their own.^{19,20}

The EU’s recent announcement that they will enforce a carbon border adjustment mechanism in 2023 has already inspired meaningful action in other countries. Russia, reportedly worried about what an EU border carbon adjustment would mean for their trade relationship, announced a plan to monitor

¹³ [“Legislation: Energy-Intensive, Trade-Exposed Industries.” American Council for an Energy-Efficient Economy \(accessed 21 May 2020\).](#)

¹⁴ [Mares, J.W. and B.P. Flannery. “WTO-Compatible Methodologies to Determine Export Rebates and Import Charges for Products of Energy-Intensive, Trade-Exposed Industries, If There Is an Upstream Tax on Greenhouse Gases.” Working Paper 18-19. Resources for the Future \(Oct 2018\).](#)

¹⁵ [“Carbon Pricing Dashboard: Up-to-Date Overview of Carbon Pricing Initiatives.” Carbon Pricing Dashboard | Up-to-Date Overview of Carbon Pricing Initiatives, World Bank.](#)

¹⁶ [World Economic Situation and Prospects, United Nations, 2021, p. 125.](#)

¹⁷ [Carpenter, Scott. “Toothless Initially, China’s New Carbon Market Could Be Fearsome.” Forbes, 2 Mar. 2021, Toothless Initially, China’s New Carbon Market Could Be Fearsome.](#)

¹⁸ [“US International Trade Data.” Foreign Trade, US Census Bureau.](#)

¹⁹ [Aylor, B., et al. “How an EU Carbon Border Tax Could Jolt World Trade.” Boston Consulting Group \(30 Jun 2020\).](#)

²⁰ [“A Healthy Environment and a Healthy Economy.” Government of Canada \(11 Dec 2020\).](#)

polluters by 2022 to serve as the basis of an emissions trading system.²¹ The EU's announcement also inspired China to accelerate the deployment of their carbon market²² because of their significant trade relationship. This is a convincing proof point that carbon border adjustments will play an important role in influencing global action on climate change.

The U.S. has the opportunity to enact a carbon price to not only avoid paying our trading partners border carbon adjustment fees, but to enact a carbon border fee adjustment that will leverage our trade relationships to encourage other countries to meet the ambition of our carbon price. Goods made in the U.S. are already 80% more carbon-efficient than the world average²³ meaning the U.S. holds a competitive advantage in a global market with an ambitious carbon price.

Quickly and Efficiently Reduce Emissions

Carbon pricing will quickly reduce emissions to put the U.S. on a path to net-zero emissions by 2050. Studies of the Energy Innovation and Carbon Dividend Act show that it would reduce U.S. emissions 50% relative to 2005 by 2030²⁴ and put us on a path to attain net-zero emissions by 2050.²⁵ Furthermore, carbon prices are less likely to be held up by judicial hurdles. Carbon fees are firmly grounded in Congress's constitutional "power to lay and collect taxes,"²⁶ making it resistant to court challenges similar to those that held up the Clean Power Plan.

Carbon pricing is an economically efficient way to reduce greenhouse gas emissions. In a comparison between regulations or a \$42/ton carbon tax to achieve the same emissions reductions, using the carbon tax approach will best protect U.S. GDP. If a carbon tax is applied, by 2036 the annual GDP will be \$420 billion higher (\$100 per month per U.S. household) than if the same emissions reductions were achieved by regulations.²⁷

Increase GDP on a Net Basis

²¹ [Khrennikova, Dina. "Russian Lawmakers Back The Nation's First Ever Climate Law." *Bloomberg.com*, Bloomberg, 20 Apr. 2021.](#)

²² [Rathi, Akshat. "Carbon Restrictions Can Bend the Emissions Curve: Green Insight." *Bloomberg Law*, 27 Apr. 2021.](#)

²³ [Rorke, Catrina, and Greg Bertelsen. Climate Leadership Council, September 2020, *America's Carbon Advantage*.](#)

²⁴ [Hafstead, Marc. "Carbon Pricing Calculator." *Carbon Pricing Calculator*, Resources for the Future, 10 Aug. 2020, \[www.rff.org/publications/data-tools/carbon-pricing-calculator/\]\(http://www.rff.org/publications/data-tools/carbon-pricing-calculator/\).](#)

²⁵ [Kaufman, Noah, et al. "A Near-Term to Net Zero Alternative to the Social Cost of Carbon for Setting Carbon Prices." *Nature Climate Change*, vol. 10, no. 11, 2020, pp. 1010–1014., doi:10.1038/s41558-020-0880-3.](#)

²⁶ [Article I. Legal Information Institute \(accessed 28 Nov 2020\).](#)

²⁷ [Analysis Insights for Policymakers ed., vol. 1, NERA Economics Consulting, Dec 2020., *Economic Impacts of the Climate Leadership Council's Carbon Dividends Plan Compared to Regulations Achieving Equivalent Emissions Reductions*.](#)

Continuing on our current climate change trajectory will have a negative impact on the U.S. GDP from changes including worsening agricultural productivity, mortality, crime, energy use, storm activity, and coastal inundation.²⁸ Reducing greenhouse gas emissions consistent with the Paris target of “well below 2°C” instead of continuing business-as-usual will result in the U.S. GDP being an estimated 2-4% higher in 2050.²⁹ A carbon fee and dividend policy would also maintain a higher U.S. GDP relative to a business-as-usual scenario through mid century and develop a far stronger GDP by 2100.³⁰

Dramatically Improve Our Health and Save Lives

The impacts of climate change have been acknowledged as the major public health challenge of the century.³¹ Burning fossil fuels harms our health directly by generating pollutants, and indirectly through release of greenhouse gases. Both the direct and indirect costs are often paid for by taxpayers. A policy consistent with 2°C would save an average of 90,000 U.S. lives a year over 50 years creating a health co-benefit value of \$700 billion per year.³²

Achieve Emissions Reductions without Adding to the Federal Deficit

Carbon pricing can not only quickly and efficiently reduce America’s greenhouse gas emissions, but can do so without adding to the federal deficit. Assessing a fee on pollution generates revenue that can be used to aid the transition to a low carbon economy. The following recent bills demonstrate effective carbon prices and uses of revenue that protect vulnerable populations:

- [The Energy Innovation and Carbon Dividend Act](#) is a revenue neutral carbon price that distributes all of the net proceeds equally back to citizens in carbon dividend payments. This legislation would reduce America’s carbon pollution by 50% by 2030 and ensure that more than 60% of Americans, especially low income Americans, have their increased carbon costs offset.³³
- [America’s Clean Future Fund of 2021 \(S.685\)](#) allocates the majority of revenues to be used as rebates to American households to manage increased carbon costs. 25% of the funds are saved to be allocated between transition assistance programs for fossil fuel employees and the Climate Change Finance Corporation (C2FC), a federal agency the bill would establish to support clean energy research and development.

²⁸ [Nunn, Ryan, et al. Brookings, 2019, *Ten Facts about the Economics of Climate Change and Climate Policy*.](#)

²⁹ [Swiss Re Institute, Apr 2021, *The Economics of Climate Change: No Action Not an Option*.](#)

³⁰ [International Monetary Fund, Oct 2020, *World Economic Outlook: A Long and Difficult Ascent*.](#)

³¹ [Watts, N., et al. “The Lancet Countdown on health and climate change: from 25 years of inaction to a global transformation for public health.” *The Lancet* 391 10120, 581-630 \(10 Feb 2018\).](#)

³² [Shindell, Drew. “Health and Economic Benefits of a 2°C Climate Policy.” 2020.](#)

³³ [Kevin, Ummel. vol. 2, Greenspace Analytics, 2020, *Household Impact Study: The Impact of a Carbon Fee and Dividend Policy on the Finances of U.S. Households*.](#)

- [The American Opportunity Carbon Fee Act of 2019](#) provides a tax credit to individuals to compensate for increased carbon cost. This bill targets assistance by providing Social Security and veterans' program beneficiaries and other retired and disabled Americans with an inflation-adjusted annual benefit and by delivering grants to states to support transition assistance.
- [The Climate Action Rebate Act of 2019](#) distributes the majority of revenue back to American households in carbon dividend payments. 20% of revenues are reserved to fund infrastructure projects, 5% to research and development, and 5% to transition assistance.