



CARBON TAXATION POLICY

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Climate Change



- To keep global warming to no more than 1.5°C as called for in the Paris Agreement, **emissions need to be reduced by 45% by 2030 and reach net zero by 2050.**

- The world is still not taking sufficient action fast enough. If we continue with only our existing unconditional 2030 pledges, a 2.7° C increase will happen. **If the net-zero emissions pledges are fully implemented, this estimate is around 2.2°C.**



- There is an urgent need for all countries to pledge net-zero emissions, to increase the robustness of their net-zero pledges, **and for all net-zero targets to be backed up by near-term actions that give confidence that the net-zero targets can ultimately be achieved.**

- Human-induced climate change, including more frequent and intense extreme events, has already caused widespread loss and damage to nature and people. Some of this is **irreversible.**



- Approximately 3.3 to 3.6 billion people live in contexts that are highly vulnerable to climate change. **This includes several areas in the United States.**

- Impacts and risks are becoming increasingly complex and more difficult to manage. **Multiple climate hazards will occur simultaneously**, and multiple climatic and non-climatic risks will interact, resulting in compounding overall risk and risks cascading across sectors and regions.

CLIMATE CHANGE IS AN INCREASINGLY SERIOUS
PROBLEM. **IT IS BOTH DEADLY AND EXPENSIVE.**

THE 2022 IPCC REPORT OF FINDINGS FROM SCIENTISTS
AROUND THE WORLD, INCLUDING THE UNITED STATES,
STATES THAT:

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Actual damage to be suffered is currently estimated to be higher than previously expected.

A **“substantial increase” in the social cost of carbon up to twice that of previous estimates** has been identified recently.

Taking sufficient action on climate change is estimated to cost \$44 trillion or 2-3% of annual global GDP. However, **not** taking such action may cost 10.5% of our annual global GDP.

What is a carbon tax?

Currently, the prices we pay for fossil fuels do not reflect the true costs of climate destabilization and air pollution. **A carbon tax is a fee imposed on the price of fossil fuels and of everything produced and distributed by using such fuels, all in proportion to the CO₂ released when the fuels are burned.**

A carbon tax would help internalize what is now typically an unaccounted-for externality. With such misleading price signals, consumers, companies, and governments all use more fossil fuels than would be the case if prices signaled the full costs of using fossil fuels.

A carbon tax is not the same as cap-and-trade. **Both a tax and a cap may be needed.**



Voter attitudes

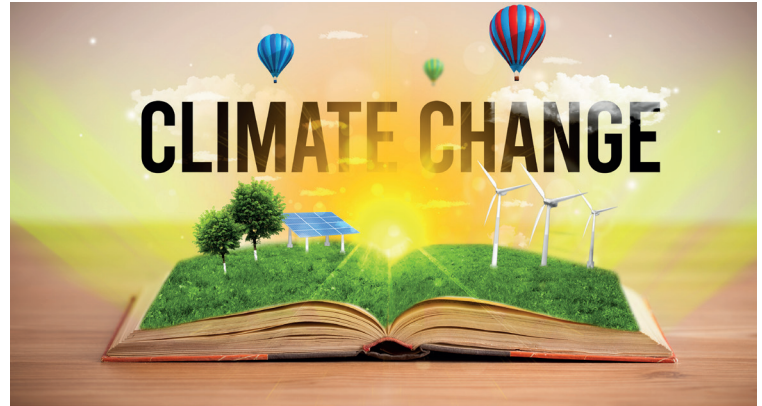
Almost 60% of Americans are now concerned or even alarmed about climate change. Fewer than 20% are doubtful or dismissive.

66% of registered voters support making fossil fuel companies pay a carbon tax. Most respondents favor a revenue-neutral carbon tax, i.e. using the revenue to reduce other taxes by an equal amount. Importantly, voters prefer progressive policies under which costs are borne mainly by those most able to pay.

If a carbon revenue is used for renewable energy research and development, as many as 60% of Americans would support it.

Several studies recommend a **“climate dividend” or “people’s payout”** for citizens. These are actual per-capita payouts from the carbon taxation and are thought of in increasingly favorable ways. **It is important to note that such a payout to individuals is often considered the most viable solution politically.**

For political feasibility reasons, “[i]f all the money is given back to citizens, carbon taxes do not swell government coffers, which appeals to the political right.



WE MUST TAKE
IMMEDIATE ACTION
AGAINST AIR POLLUTION



Researching & supporting timely solutions to climate change and global poverty

Climate change affects already disadvantaged people in the U.S. and beyond more than wealthier ones.

We only have about a decade left to prevent potentially catastrophic climate change. We can do so, but we need “all hands on deck” before it is too late.

The left is also interested because the average tax burden is unchanged and low-income households are better off.”

We currently **subsidize** fossil fuels globally.

Today, the global carbon price is only around \$2 of CO₂. Only about 20% of global emissions are covered by actual carbon pricing schemes.

If subsidies are taken into account, the average global carbon price today is minus \$8; in other words, we actually donate money for carbon extraction and use!

A tax on CO₂ emissions would raise the price of fossil fuels (oil, coal, and natural gas), which would cause consumers and businesses to switch to lower-carbon fuels, invest in energy-efficient upgrades, or reduce fossil-fuel purchases, among other options.



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Tax amount

There is no magic formula or perfect number of a carbon tax, but one view is that a “starter tax” that grows fast enough to reduce CO₂ emissions by a third within a decade probably offers a viable combination of meaningful incentive and opportunity for adaptation. At least as important as the tax level is the commitment to keep raising the tax, preferably annually, so that energy-critical decisions are made with carbon-appropriate price signals.

A February 2022 Congressional Budget Office report shows that taxes starting between \$25 and \$50 per ton of CO₂ and growing by 1-5% annually will not have a sufficiently significant effect on CO₂ emissions but for, potentially, the electric power sector. More is needed.

The Biden administration’s estimated \$51/ton may also be too low because it is based on climate models dating to the 1990s.

The International Monetary Fund has proposed a tax of \$75 per ton by the end of this decade.

Climate scientists state that setting the global average price of carbon per ton at \$100 or more is necessary right away to incentivize net zero emissions by 2050. This higher-than-initially expected price for carbon is seen as essential to fund the transition to net zero emissions by 2050.

The OECD has calculated that **\$136 per ton is a central estimate of the carbon price needed in 2030 to decarbonize by mid-century.**

While carbon taxes will need to be introduced and rise briskly to create the required price incentives, they will also, after all, need to be **phased in** to give individuals and businesses the opportunity to adjust. The economy could suffer significantly for too long or even shut down temporarily with a suddenly very high carbon tax. But with not much time left, that is becoming a challenge that will only get yet worse over time.

The revenue & how to spend it

Carbon pricing revenues have the potential for generating large amounts of money. In 2019, the few existing carbon taxes generated \$ 45 billion. Although a “starter

tax” of as little as, e.g., \$15 per ton CO₂, is likely already too modest given the urgency of climate change, even such a modest tax would **bring in \$80 billion of revenue, which equates to around \$250 per U.S. resident or \$1,000 for a family of four if the revenue** was transferred to individuals.

Importantly, if that family uses less fossil fuel energy than average, their increased costs will be less than \$1,000, so they will come out ahead. By the end of the tenth year, the annual revenue could, by some calculations, be approximately \$440 billion.

Another estimate predicts more than \$8 trillion in revenue over a period of ten years, an average of about \$2,400 per person per year. This would mean that the carbon price would be \$485/t CO₂ in the tenth year, pushing gasoline prices above \$6 per gallon in today’s money. **A brisk rise in the cost of CO₂ pollution would reduce U.S. emissions dramatically, by about 1/3.**

What to tax

The top greenhouse gases (“GHGs”) in the United States are carbon dioxide (80%), methane (10%), nitrous oxide (7%) and fluorinated gases (3%).

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The energy sector is responsible for carbon emissions to the following extent:

- Electric power 33%
- Transportation 28%
- Industrial use 17%
- Residential use 7%

Fossil fuel taxation

Fossil fuel combustion accounts for almost 80% of total U.S. greenhouse gas emissions. To attach a price to these emissions, policymakers could apply a carbon tax to a relatively small number of entities, including the following (with numbers):

- Petroleum refineries (115) and petroleum importers (235)
- Coal mines (1,296) and coal-fired generators using imported coal (19) and
- Some combination of natural gas sector entities.

Thus, less than 2,000 entities need to be taxed. Experts consider that to relatively simple.

Natural gas taxation

A carbon tax could also be applied to the natural gas

production and consumption chain. For example, a carbon tax could be imposed at natural gas wellheads and points of import. Although this option would involve more than 500,000 entities, a relatively small number of operators control a large percentage of domestic production.

Alternatively, policymakers could apply the tax to (1) entities who report natural gas deliveries to the Energy Information Administration (EIA) on Form EIA-17623 and (2) natural gas processors. That would amount to approx. 2,200 entities. **This would likely cover nearly 100% of the CO₂ emissions from combustion as well as some of the methane emissions from natural gas systems.**

Tax collection methods

Carbon taxes could be applied upstream (the simplest option), midstream, or downstream.

Existing programs

There are already 64 carbon pricing initiatives in force across the globe on various regional, national, and subnational levels, with three more scheduled for implementa-

tion. Together, these initiatives have been estimated to cover 21.5% of global greenhouse gas emissions in 2021.

In Sweden, companies already pay a combined price of approximately \$200 per ton of carbon emissions.

Some of the countries or regions that have implemented a carbon tax include Argentina, Canada, Chile, China, Colombia, Denmark, the European Union, Japan, Kazakhstan, Korea, Mexico, New Zealand, Norway, Singapore, South Africa, Sweden, the UK, and Ukraine. Other countries that are considering joining them include Brazil, Brunei, Indonesia, Pakistan, Russia, Serbia, Thailand, Turkey, and Vietnam.

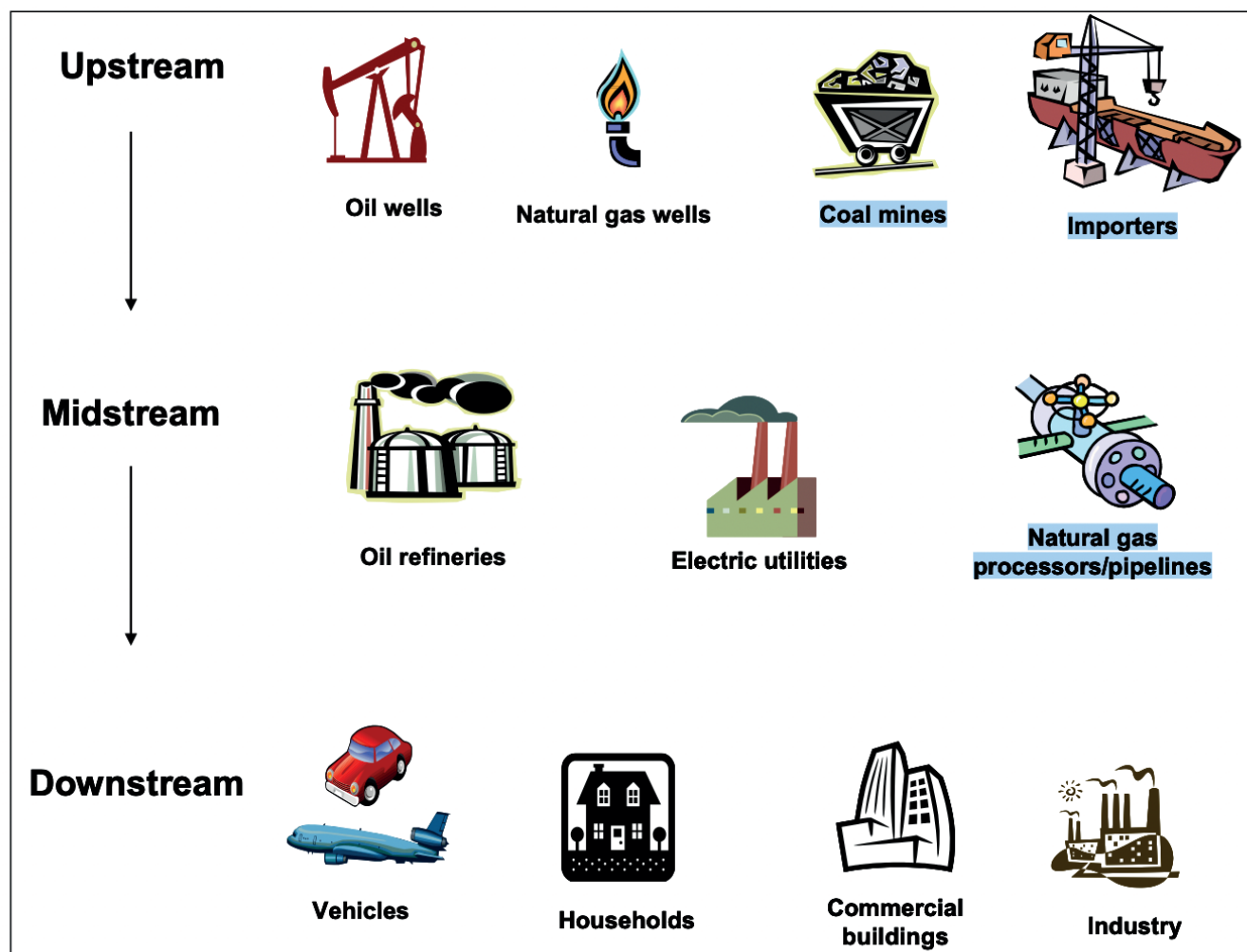
Language is important

Speak the right language in this context. Climate conversations are typically conducted in the language of the left which can be described as “communitarian and egalitarian,” indicating that the left focus on community and they believe in fairness.

That language doesn’t work as well when it finds its way to conservative ears. Conservatives respond to hierarchical, individualistic language. This is because they believe in working through a chain of command.

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Figure 1. Illustration of Options for Points of Taxation within the Energy Production-to-Consumption Chain



Source: Prepared by CRS.

Note: Electric utilities could be listed as either downstream entities—because they are direct sources of emissions—or midstream, because their emissions are tied to the electricity consumption of their customers, the further downstream consumers.

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They want to achieve things for themselves, they believe in individual effort and reward. This creates a language barrier that can instantly turn off an audience.

In short, instead of using words such as a “tax,” “carbon,” or even “climate change,” use more neutral phrases such as

- “climate fees”
- “renewable energy surcharges”
- “public benefit funds”
- “social benefit charges”
- “user fees,” or simply
- “charges on energy consumption.”

Democratic Party views

Democrats tend to favor carbon taxation and other environmental initiatives and regulations.

They view this as a matter of doing what is the **“right thing”** for people and ecosystems.

Democrats also believe in the calls for international action such as that under the Paris Agreement.

They focus on the **green, better-paid jobs that could be created via the energy transition.**

They emphasize the opportunities for companies that seize the chance of leadership and innovation in a greener economy.

Republican Party views

Republicans disfavor taxes and government control as well as top-down regulations such as the ones often called for regarding air pollution and climate change.

They disfavor international calls for action such as that under the Paris Agreement.

They are interested in solutions that do not help or hinder any sectors of the economy, but that will let businesses compete on even terms. While a carbon tax would, of course, eventually impact the traditional energy sector, **a carbon tax would apply evenly to everyone using fossil fuels lead to market-based solutions.**

Republicans are interested in innovation and American competitiveness. **Climate change requires much crea-**

tivity. American companies can compete globally if given the right signals to do so. Republicans do not want to see American companies lag behind others on the world stage.

They forget that much environmental innovation was taken by, for example, **Ronald Reagan, who was the first president to call for research into global warming** and Richard Nixon, who oversaw the adoption of the Endangered Species Act. The Republican Party is currently not conserving our American environment as much as even recent Republicans would have.

They value conserving resources. The environment is a valuable resource.

Republicans also value saving money. **It is much cheaper to act on climate change now than to wait.** A carbon tax sidesteps traditional regulation, allowing the magic of market forces to do the lion's share of emissions-cutting.

A carbon tax does not have to go into government coffers. It can be revenue-neutral and funneled directly to private individuals as a “dividend,” allowing individuals to make the choices about energy consumption that they want to.

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Conclusion:

- A majority of Americans are now, for very good reason, worried about the effects of climate change. Young Republicans are worried about it too.
- Carbon pricing can be a very effective decarbonization policy.
- Regulatory action may be needed in addition to taxation.
- The OECD estimates that a tax of \$136 per ton is needed by 2030 to decarbonize by mid-century.
- To be politically viable, the tax would likely have to be revenue-neutral and progressive, i.e. favoring low-income earners. This could help alleviate poverty.
- Ideally, all nations around the world would charge a carbon tax, but action by some nations is better than no action.
- Climate change is already deadly and expensive. We must take action now!



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An award-winning legal researcher, attorney, and Fulbright Scholar, Myanna Dellinger, M.Sc., J.D., PhD candidate (Political Science, 2022), graduated at the top of her law school class, Order of the Coif, in 2008. She then worked for state- and federal-level judges at the trial and appellate levels including the Ninth Circuit Court of Appeals.

Myanna was a tenured law professor teaching business law and public international law for more than a decade. Myanna now assists the Foundation in identifying viable and urgent solutions to climate change and educational issues around the world.

Myanna has published more than 500,000 words on climate change risks to people, corporations, governments, and ecosystems. She has been ranked at the top 10% of all authors by download on SSRN for four years consecutively.

More than 100 judges, attorneys, and scientists have cited to Myanna's publications. Originally from Denmark, Myanna has lived and worked in four countries on three continents. She speaks three languages fluently. She is an avid outdoor enthusiast and enjoys the Southern California beaches and mountains.





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to climate change and global poverty**

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