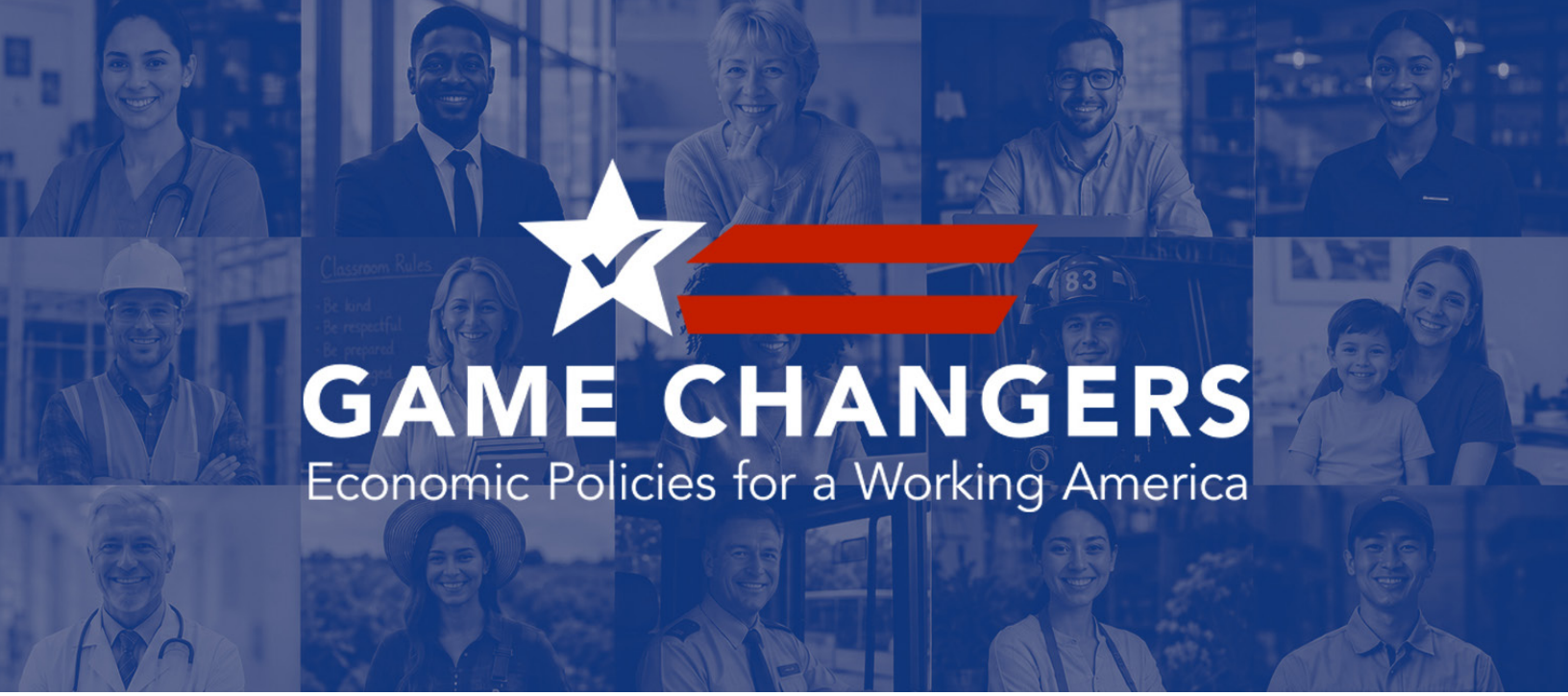

BACKGROUND PAPER / JULY 2026

The Fossil Fuel Phasedown:

Energy Security and Climate Defense for All

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THE FOSSIL FUEL PHASEDOWN
Energy Security and Climate Defense for All

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Executive Summary

Fossil fuels threaten the energy security of working Americans as well as the world's climate. The volatility in world oil and natural gas markets sparked by the Iran war has made the energy insecurity of dependence on fossil fuels painfully clear. At the same time, the increasing severity of extreme weather events portend even graver consequences if we fail to free ourselves from this dependence. For both reasons, we must act with speed and determination to phase down America's use of fossil fuels.

To achieve the fossil fuel phasedown and at the same time strengthen the energy security of working families and foster resilient communities, we need to reduce the quantity of fossil carbon allowed to enter the economy in oil, natural gas, and coal along a trajectory that attains the goal of net-zero carbon in 30 years. Permits to extract or import fossil fuels up to this limit should be auctioned to fossil fuel corporations, with 75 percent of the auction revenue returned to households as Energy Security Cashbacks and 25 percent allocated to state and local governments by a Resilient Communities Fund.

The triad of climate defense, energy security, and resilient communities will benefit working Americans in multiple ways:

First, it will help to safeguard current and future generations from climate destabilization that would result from continued dependence on fossil fuels.

Second, it will protect consumers and the nation's economy from continued vulnerability to the extortionate prices of world oil and gas markets. Free-range solar, wind, and geothermal energy do not have to pass through the Strait of Hormuz, and their prices cannot be manipulated by cartels of corporations and petrostates.

Third, the Energy Security Cashbacks will protect the purchasing power of all but the wealthiest American families during the fossil fuel phasedown, raising net incomes for most and transforming gasoline prices into an income booster for working families rather than a threat to their ability to make ends meet.

Fourth, the Resilient Communities Fund will protect the purchasing power of state and local governments and strengthen their fiscal capacity to invest in climate resilience. The Fund will also address the needs of communities most impacted by the environmental legacies of fossil fuels and by the phasedown.

Fifth, the fossil fuel phasedown will improve public health by reducing emissions of hazardous air pollutants, including particulates, nitrogen oxides, and carbon monoxide.

Finally, the universality of the policy will guarantee that all Americans share alike in the policy's benefits, conveying a message of unity for the common good as opposed to division and despoilation.

Introduction

The climate crisis threatens working people in the United States and throughout the world. Future generations are at greatest peril, but its impacts are being felt today as extreme weather events grow more frequent and intense. These damages will only worsen if we fail to act quickly to phase down fossil fuels.

Fossil fuels destabilize the nation's economy as well as the world's climate. The closure of the Strait of Hormuz in spring 2026 caused by the Iran war, resulting in what the International Energy Agency describes as "the most severe oil supply shock in history," underscored the costs of continued reliance on extractive energy sources that are vulnerable to geographical and political chokepoints and price manipulation.[1] Free-range energy from wind, solar, and geothermal sources is immune to these risks: after the initial investment in equipment, the energy itself is costless.

This paper proposes a straightforward policy to phase down fossil fuels: set a hard annual limit on the quantity of carbon from fossil fuels that is allowed into the nation's economy; tighten the limit yearly at a rate that brings us to net zero within a defined time frame; auction permits to supply fossil fuels up to the limit; and channel the auction revenue directly to the public to safeguard the energy security of families and communities.

This policy will mitigate the effects of climate change, but it will not undo the effects of past emissions. Climate adaptation investments are needed too.[2] But we can and must prevent the climate crisis from escalating from the terrible to the truly catastrophic.

[1] International Energy Agency, "Oil Market Report," 14 April 2026, https://www.iea.org/reports/oil-market-report-april-2026.
[2] See "Polluters Pay: The Extreme Weather Superfund."

We can and must prevent the climate crisis from escalating from the terrible to the truly catastrophic.

Energy Security Cashbacks will safeguard the energy security of working Americans during the fossil fuel phasedown. Except for the wealthiest Americans, households will receive more in cashbacks than they pay in higher fossil fuel prices. And in the long term, the policy will lead a more energy-secure economy nationwide by expediting the transition to free-range energy.

The core dilemma in phasing down fossil fuels is how to win and maintain broad and durable public support for the policy. The crux of this problem is the *cost conundrum*. Restricting supplies is likely to raise fossil fuel prices, much as the price of oil rises when OPEC restricts production. Ever since the failed efforts to enact a cap-and-trade bill in this century's opening decade, higher fuel prices have been perceived by many lawmakers as a political third rail: fatal to whoever dares touch them.

The policy outlined here resolves this dilemma by recycling the money from higher fuel prices directly back into the hands of households and communities. The basic concept is straightforward:

1. Require fossil fuel corporations to buy one permit for each ton of carbon they plan to bring into the nation's economy, the total quantity of permits being fixed by the annual limit.
2. Sell these permits, which are non-tradable, at quarterly auctions.
3. Recycle all the auction revenue to the public in equal per-person Energy Security Cashbacks and through a Resilient Communities Fund.

For fossil fuel corporations, the permits become an additional cost of doing business, and they can be expected to pass through some or all of this cost to consumers in higher fuel prices. Households with outsized carbon footprints – because they heat and cool very big houses, travel a lot by air, and so on – will pay more in fuel prices than they receive in cashbacks, but they can afford it. Working families, on the other hand, consume less-than-average amounts of carbon simply because they consume less of just about everything. They come out ahead in sheer pocketbook terms: the cashback more than covers the higher fuel costs. Upper-middle class households whose consumption is in between break even. All income classes benefit from a cooler planet and cleaner air, but the benefits are especially significant for households that cannot afford insurance, air conditioning, and other private cushions against the damages of fossil fuel pollution. In short, the policy's distributional effect is *strongly progressive.*

The ethical principles behind it are straightforward too. Consumers pay into the revenue pot in proportion to their use of fossil fuels. Every resident receives an equal cashback on the premise that the planet's limited capacity to absorb emissions belongs to us all – not to corporations, and not to the government.

State and local governments also consume fossil fuels, and they too will receive a share of the auction revenue, through a Resilient Communities Fund (RCF) created for this purpose. Like cashbacks, most RCF funding will be distributed among states and communities on an equal per-person basis. Part of the RCF

funding, however, will be earmarked specifically for those regions and communities that were most harmed by fossil fuel pollution or will be most impacted by the phasedown.

In the case of highly energy-intensive industries, like steel and chemicals, domestic producers may face competition from foreign producers who do not face equivalent prices for fossil fuels. In these cases, border price adjustments can be levied to ensure a level playing field.

Carbon dioxide is a global pollutant – emissions anywhere affect people everywhere – so to solve the climate crisis the fossil fuel phasedown must be global too. Regardless of how quickly other countries move to phase down their own use of fossil fuels, the policy outlined here can win strong public support because it couples environmental benefits with the clear economic benefits of cashbacks and energy security. National climate action need not be held hostage to an international agreement. Indeed, the success of this policy would likely inspire other nations to follow suit. Instead of being an international laggard in climate action, the United States can become a leader.

The Phasedown

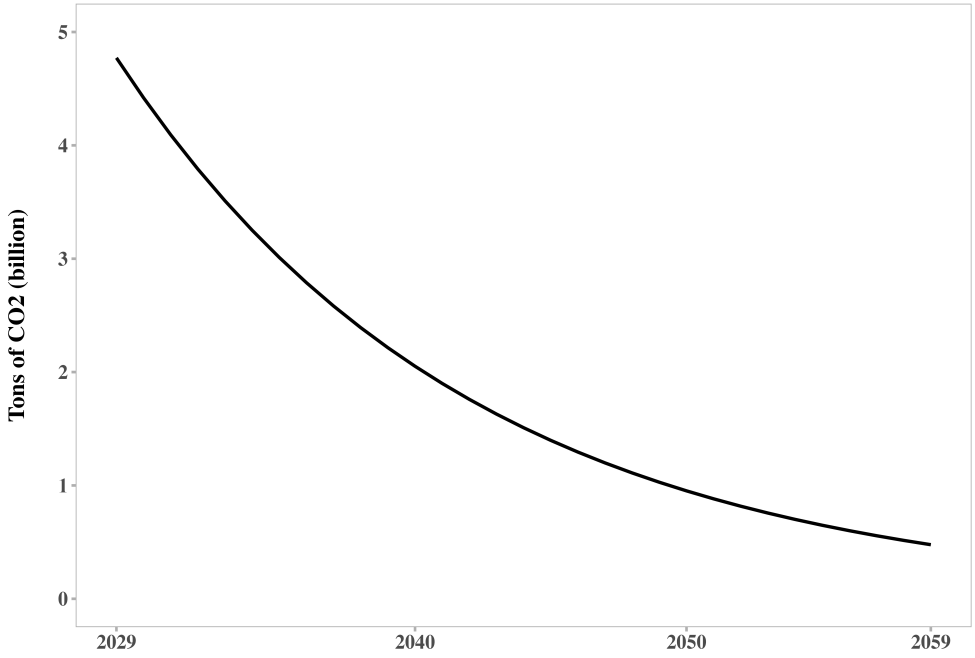
By setting a hard limit on the amount of fossil carbon entering the nation's economy from the extraction and importation of oil, natural gas, and coal that tightens at a steady rate of 7.4% per year, we will achieve a 90% reduction in 30 years. Negative emissions technologies are expected to provide the remaining 10% needed to attain "net-zero" carbon emissions.

The trajectory is shown in Figure 1. The biggest reductions in absolute terms (and therefore the biggest impacts on cumulative emissions) occur in the policy's early years, when the constant percentage reduction applies to a larger base.

The phasedown policy does not preclude other measures to hasten the clean energy transition; on the contrary, it complements them. Other policies such as fuel economy standards for vehicles, renewable portfolio standards for electricity providers, and public investment in transportation and energy infrastructure can play important roles too. What is distinctive about the policy, however, is that it *guarantees* a successful phasedown in a specified time frame by setting an outer envelope on carbon emissions.

FIGURE 1: Carbon emissions trajectory

The fossil fuel phasedown will cut emissions by 7.4% per year.



Permits will be issued up to the annual limit set by the trajectory and sold to fossil fuel firms at competitive auctions. If complementary policies reduce demand for fossil fuels, the auction price will be lower than would otherwise be the case, and if these policies prove to be so effective that are sufficient to achieve the mandated trajectory on their own – an outcome conceivable in theory, but unlikely in practice – the auction price simply would fall to zero. Since U.S. CO2 emissions from fossil fuels peaked in 2007, they have declined at an average rate of 1.5% per year.[3] This history suggests that the policy's hard limit will not be redundant in the presence of other climate policies. Instead, it will guarantee timely progress in the transition from fossil fuels to free-range energy.

Not Just the Climate: From Extractive to Free-Range Energy

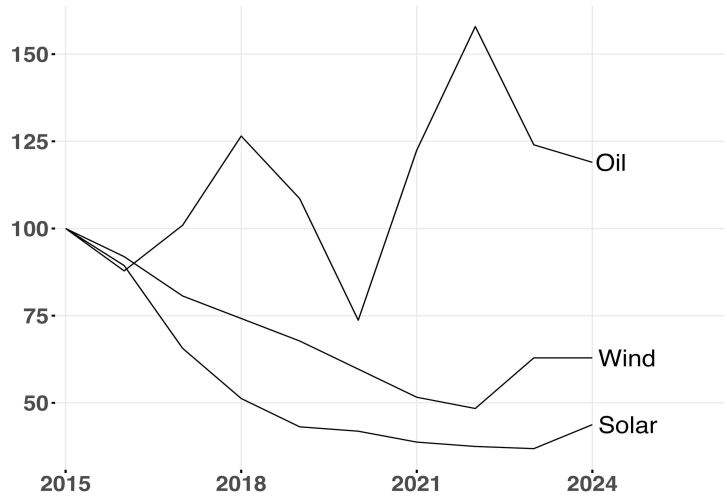
The fossil fuel phasedown will not only help to avoid escalation of the climate crisis. It will also make households and the entire economy less prey to volatility and extortionate pricing in the markets for oil and natural gas. As the Iran war illustrates, American consumers are exposed to these despite the nation's status as a fossil fuel exporter: domestic prices track the world price.

Figure 2 shows price trends for oil, wind, and solar energy over the decade prior to the Iran war. Two things stand out. First, the prices of renewables have declined consistently, whereas the oil price has not. Second, the oil price fluctuates greatly, but wind and solar prices do not.

[3] U.S. Energy Information Administration, "U.S. energy-related carbon dioxide emissions, 2024," https://www.eia.gov/environment/emissions/carbon/.

FIGURE 2: Levelized Cost of Energy

(2015=100)



Sources: IRENA and FRED.

Given this history, it is ironic to see renewable energy derided by fossil fuel proponents as "unreliable." It is true, of course, that the sun shines only in the daytime and that wind speeds vary (though generally being stronger at night, making wind power a nice complement to solar power). With advances in battery storage, however, the "intermittency" feature of wind and solar is a problem with a relatively straightforward solution. Since 2010, battery storage costs have fallen even more rapidly than the costs of solar and wind, declining by 93%.[4]

The wild swings in fossil fuel markets are something else entirely, as seen in Figure 2. This reflects a profound difference between extractive and free-range energy. Extractive energy, exemplified by fossil fuels but also including uranium, comes from underground reserves unevenly distributed across the world. Their supply is vulnerable to chokepoints, both geographical and political, as a result. The markets for extractive fuels are global, since they must be transported from wherever they are found to the places they are processed and consumed. Solar and wind power, in contrast, do not have to transit the Strait of Hormuz. Nor can their prices be manipulated by multinational cartels and petrostates.

The volatility of world oil markets has been plain to see since the first OPEC price shock of 1973- 1974. It was on display again in the 1979 oil crisis, set off by the Iranian revolution. The 2008 oil price spike helped to trigger the ensuing world financial crisis. Russia's invasion of Ukraine in 2022 caused the most recent price surge prior to the latest crisis sparked by the Iran war.

[4] International Renewable Energy Agency, "24/7 renewables outcompete fossil fuels on cost," Press release, May 6, 2026, https://www.irena.org/News/pressreleases/2026/May/24-7-Renewables-Outcompete-Fossil-Fuels-on-Firm-Costs.

Solar and wind power do not have to transit the Strait of Hormuz. Nor can their prices be manipulated by multinational cartels and petrostates.

President Trump's decision to launch a war on Iran precipitated the biggest-ever monthly jump in oil prices in March 2026.[5] In the wake of this latest crisis, countries across the world are drawing the obvious conclusion that it is time to accelerate the transition away from fossil fuel dependence as rapidly as possible.[6] The irony was noted by Simon Stiell, the United Nations climate chief: "Those who've fought to keep the world hooked on fossil fuels are inadvertently supercharging the global renewables boom."[7]

Permit Auctions

During the 30-year fossil fuel phasedown, when a corporation brings fossil fuels into the U.S. via extraction or imports it will be required to turn in one permit per ton of CO2 that will be released when the fuel is burned. The total number of permits will be set by the phasedown trajectory. Permits will be sold at auctions, as has been done quarterly for power plants in the northeastern states in the Regional Greenhouse Gas Initiative since 2009.

At every pipeline terminal, tanker port, and coal mine head where the fossil fuels enter the nation's economy – roughly 2,000 points nationwide – permits will be collected.[8] The collection of permits upstream, where fossil fuels first enter the economy, minimizes administrative costs compared to midstream systems (in which the compliance entities are fuel distributors) or downstream systems (applied to final consumers).

The only eligible buyers at permit auctions will be fossil fuel firms. Fuel prices can be expected to rise as a result of the supply restriction, much as they do when OPEC cuts oil production, with the crucial difference that in this case the extra money goes to the public rather than swelling the coffers of corporations and petrostates. Fossil fuel firms will decide how much to bid at the permit auctions based on what they expect to recoup from consumers. If a firm buys more than permits it ends up needing to use in a given quarter, they can be retained for use up to five years from the purchase date.

No giveaways, no permit trading

No permits are handed out to corporations free of charge. Because the firms can buy what they want at the auction, there is no need for permits to be tradable. In both these respects, the policy differs

[5] International Energy Agency, "Oil Market Report," 14 April 2026, https://www.iea.org/reports/oil-market-report-april-2026.
[6] Chico Harlan, "The global oil crisis seems to be helping one industry: renewable energy," *New York Times,* May 6, 2026, https://www.nytimes.com/2026/05/06/climate/irena-renewables-energy-cost.html.
[7] UNFCCC, "UN climate chief: an immense irony is unfolding: fossil fuel proponents 'inadvertently supercharging the global renewables boom," April 30, 2026, https://unfccc.int/news/un-climate-chief-an-immense-irony-is-unfolding-fossil-fuel-proponents-inadvertently-supercharging.
[8] Congressional Budget Office, "An evaluation of cap-and-trade programs for reducing U.S. carbon emissions," June 2001.

fundamentally from "cap-and-trade" systems in which permits are given for free to corporations using a formula typically based on past emissions. Free permits confer windfall profits on the recipients, since they capture the higher fuel prices resulting from the supply restriction but without paying for the privilege. Cap-and-trade also opens opportunities for middlemen and speculators to siphon part of the money paid by consumers. The no-giveaway, no-trading policy closes these avenues for corporations to profit at the public's expense.

Price passthrough to consumers

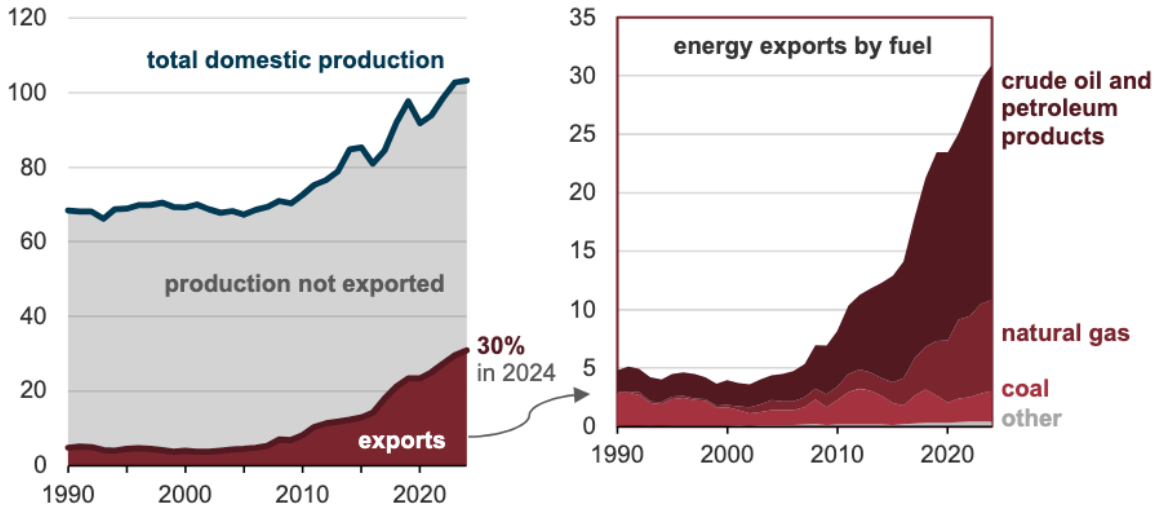
The permits become part of the cost of doing business for fossil fuel corporations, and they will seek to pass through much of the cost to their customers. This will raise the prices of gasoline and other fossil fuel energy, and the prices of other goods and services in proportion to the use of fossil fuels in their production and distribution.

Economists often assume there will be 100% cost passthrough to consumers. But empirical evidence suggests that firms may be willing to absorb part of rising energy costs to maintain or expand their market shares. A recent study of U.S. manufacturers found an energy-cost passthrough rate of about 70%.[9] In the calculations presented below, we estimate the policy's net impact under both these scenarios.

Fossil fuel exports

In the past decade, U.S. oil and natural gas exports surged to the point that they now account for about 30 percent of the nation's fossil fuel extraction (see Figure 3).

FIGURE 3: U.S. Energy Production and Exports (quadrillion BTUs)
Exports now account for 30% of U.S. fossil fuel production



Source: U.S. Energy Information Administration.

[9] S. Ganapati et al., "Energy cost pass-through in U.S. manufacturing: Estimates and implications for carbon taxes," *American Economics Journal: Applied Economics,* 2020.

The phasedown policy treats exported fossil fuels the same as fuel consumed domestically. In both cases, permits are required when the fuel is extracted. Because export prices are set on the world market, firms will have less scope to pass through the cost of permits. Instead, exporters will experience reductions in their profit margins. An upside for exporters is that the policy will make U.S. exports less likely to be subject to the Carbon Border Adjustment Mechanism (CBAM) duties that went into force in the European Union in January 2026. For households and communities, permit sales to exporters add significantly to the total revenue available for Energy Security Cashbacks and the Resilient Communities Fund.

Fossil fuel use for plastics

Roughly five percent of U.S. fossil fuel use is for feedstock in the manufacture of plastics.[10] In addition to emissions during production, the incineration or eventual degradation of plastics releases CO2 and other toxins and greenhouse gases. In the meantime, microplastics pollution and plastic waste pose additional environmental threats. The phasedown policy treats fossil fuels used in plastics the same as fossil fuels used as energy. Reducing the use of virgin fossil fuels in plastics will help to spur the development and deployment of safer and more sustainable alternatives.[11]

Energy Security Cashbacks

Seventy-five percent of the revenue from permit auctions will be returned straight to the people as equal per-capita cashbacks, deposited quarterly into bank accounts or sent via checks in the mail, and clearly labeled as *Energy Security Cashbacks*. These will maintain household purchasing power in the face of higher fossil fuel prices and provide net income gains for most Americans.

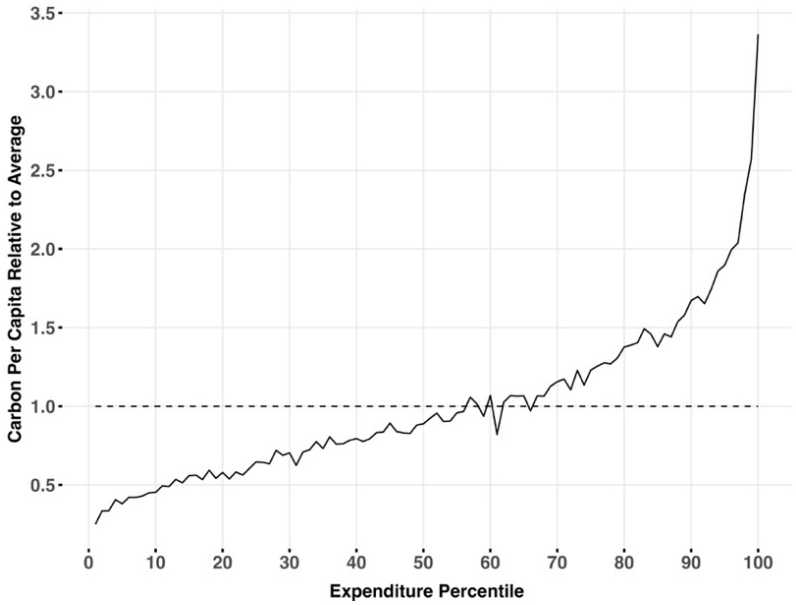
Who pays how much in higher fuel prices?

Higher fuel prices affect households in proportion to their use of fossil fuels. Carbon consumption varies dramatically across the income spectrum as shown in Figure 4. The outsized consumption of the richest households pulls up the national average, much as the average customer in a bar becomes a millionaire when Mark Zuckerberg walks in the door. Three in five American households consume less-than-average amounts of carbon.

[10] U.S., Energy Information Administration, "U.S. fossil fuel consumption by source and sector, 2024."
[11] The chemical industry transition is addressed in a companion policy proposal, the Chemicals without Harm Act.

FIGURE 4: Carbon per capita by household expenditure class

The richest 1% account for an outsized share of total emissions.



Source: See Appendix.

Net impact on household incomes

The Energy Security Cashback is the same for every person – the policy translates into concrete practice the ethical principle that we all share equally in rights to the gifts of nature, including the planet's limited carbon absorptive capacity. Because cashbacks are not affected by an individual's own consumption, households retain an incentive to reduce their own use of fossil fuels.

Table 1 shows the net distributional impact across consumption deciles, from the poorest ten percent of the population to the richest. For illustrative purposes, we use a permit price of $100 per ton of CO2 and the year-one quantity of permits 7.4% below 2024 emissions.[12] Two estimates are presented, one based on the assumption of 100% cost passthrough and the other on 70% passthrough.[13]

[12] One dollar per ton of carbon translates into one cent per gallon of gasoline. A $100/ton permit price therefore adds one dollar to the gallon price.

[13] For details, see Appendix.

TABLE 1: Energy Security Cashbacks: Net impact on household incomes

With cashbacks, most households come out ahead.

		100% Passthrough		70% Passthrough	
Decile	**Cashback**	**Fuel Price Impact**	**Net Impact**	**Fuel Price Impact**	**Net Impact**
1	$1,398	$412	$986	$288	$1,110
2	$1,398	$574	$824	$402	$996
3	$1,398	$671	$727	$470	$928
4	$1,398	$791	$607	$553	$845
5	$1,398	$888	$510	$622	$776
6	$1,398	$1,029	$369	$720	$678
7	$1,398	$1,105	$293	$773	$625
8	$1,398	$1,310	$88	$917	$481
9	$1,398	$1,570	-$172	$1,099	$299
10	$1,398	$2,242	-$844	$1,569	-$171

Source: Authors' calculations (for details, see Appendix).

With 100 percent passthrough, eight deciles come out ahead, receiving more in cashbacks than they pay in higher fossil fuel prices. The two richest deciles pay more than they get back; they can afford it. With 70 percent passthrough, all but the top decile come out ahead. The most likely outcome lies somewhere between these two scenarios.

There are two reasons why the great majority of households come out ahead financially:

- First, most people consume less-than-average amounts of fossil fuels, as shown in Figure 4.
- Second, while household consumption accounts for about 55% of total auction revenue, 75% of the revenue goes to cashbacks. Government consumption accounts for about 14% of the revenue and fossil fuel exports for the remaining 31%.

Cashbacks will maintain purchasing power in the face of increased fossil fuel prices and bring net income gains to most Americans.

The dollar amounts shown in the table will rise in subsequent years if the increases in fossil fuel prices outpace the decline in the quantity of permits auctioned. In the past, the long-run price elasticity of demand for fossil fuels has been about 0.6; that is, a 6% decrease in quantity is associated with a 10% increase in prices.[14] The predictability of continuing reductions in supply in line with the phasedown trajectory may yield a somewhat more elastic response, but the size and net impacts of the cashbacks are likely to grow in the early years.

The Resilient Communities Fund

Twenty-five percent of the auction revenue will go to state and local governments via a Resilient Communities Fund (RCF). Most of this money – twenty percent of the total auction revenue – will be distributed in proportion to population, mirroring the equal per capita cashbacks to individuals. The remainder – five percent of total revenue – will be dedicated specifically to assist the carbon-intensive regions and communities most impacted by the environmental legacies of fossil fuels and by the phasedown of fossil fuel production.

Per capita allocation

With the same assumptions as before, the RCF funding distributed on an equal per-person basis will amount to $127 billion in year one of the phasedown.[15] This funding will maintain the purchasing power of state and local governments in the face of fuel price increases, and help to fund investments in energy efficiency and free-range energy infrastructure, complementing other sources of funding.[16]

As in the case of the cashbacks, most communities will receive more in RCF funds than they pay in higher fuel prices for similar reasons. First, state and local government expenditures on fossil fuels per resident are skewed in favor of affluent communities; those that consume less will experience bigger net gains. Second, while government spending accounts for about 14% of emissions, the population-based component of the RCF receives 20% of auction revenue.

Post-fossil fuels transition assistance

The RCF funding earmarked for regions and communities most impacted by fossil fuels will amount to $32 billion in year one. These funds are intended to support a just transition for fossil fuel workers and environmental clean-ups in the localities most heavily impacted by pollution from fossil fuel extraction and processing.

Just transition: The phrase “just transition” dates from the pioneering effort led by Tony Mazzocchi of the Oil, Chemical, and Atomic Workers International Union in the 1970s to ensure that the phasedown of industrial plants for environmental reasons does not come at the expense of workers and communities that have been dependent on them.[17] Since then, it has become an important part of energy transition discussions worldwide. For example, the European Union’s Just Transitions Mechanism

[14] J.K. Boyce, *The Case for Carbon Dividends,* Polity Books, 2019.
[15] For details, see Appendix.
[16] Other funding sources are discussed in two companion Game Changer proposals, Polluters Pay – The Extreme Weather Superfund and National Disaster Insurance and Community Investment to Make Homes Safe and More Affordable.
[17] J. M. Cha, *A Just Transition for All: Workers and Communities for a Carbon-Free Future,* MIT Press, 2024.

invests roughly $9 billion per year in regions being economically impacted by the conversion to a climate-neutral economy.[18]

Environmental remediation: Clean-ups, including coal ash remediation, strip mine rehabilitation, plugging orphaned oil and gas wells, and decontamination of refinery sites, will improve community health and create tens of thousands of jobs. Many of these jobs can be filled by community members and former fossil-fuel workers who have the needed skills or can acquire them.[19] Environmental clean-ups will especially benefit low-income and minority communities that suffered disproportionate harmful impacts from the fossil fuel industry in the past.[20]

Resilient Communities Corps

A potential vehicle for some RCF expenditures is a Resilient Communities Corps established to provide work and job training for unemployed youth and to foster community engagement. A well-known precedent for such an initiative is the Civilian Conservation Corps of the 1930s. Similar proposals include the American Climate Corps launched by President Biden in 2023 (but cancelled by President Trump in January 2025) and the Civilian Climate Corps for Jobs and Justice introduced by Representative Alexandria Ocasio-Cortez in December 2023, which has 54 House co-sponsors.[21]

Cleaning the Air: The Environmental Justice Guarantee

The phasedown will reduce emissions of the many hazardous pollutants generated by fossil fuel combustion, including sulfur dioxide, carbon monoxide, and airborne particulates. This will result in significant gains in public health. The inclusion of an *environmental justice guarantee* will ensure that communities that have been most adversely impacted by fossil fuel pollution will get priority in these air quality improvements.

Health benefits

Air pollution from fossil fuels is responsible for tens of thousands of premature deaths annually in the United States. MIT researchers put the total mortality at more than 200,000 deaths in 2005, with road transportation and power plant emissions accounting for more than half of these.[22] Air quality improvements since 2005, above all thanks to less burning of coal, have lowered the toll, but the number of premature deaths remains high. A 2025 study estimated that air pollution from oil and

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[18] European Commission, "The Just Transition Mechanism: Making sure no one is left behind," https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism_en.

[19] D. Saha and J. Neuberger, "Steps to aid U.S. fossil fuel workers in the clean energy transition," World Resources Institute, January 25, 2021, https://www.wri.org/insights/steps-aid-us-fossil-fuel-workers-clean-energy-transition.

[20] See the Environmental Justice Legacy Pollution Cleanup Act introduced by Senator Cory Booker and Representative A. Donald McEachin in 2021, https://www.booker.senate.gov/news/press/sen-booker-rep-mceachin-announce-reintroduction-of-the-environmental-justice-legacy-pollution-cleanup-act. See also T.Q. Donaghy et al., "Fossil fuel racism in the United States: How phasing out coal, oil, and gas can protect communities," *Energy Research & Social Science,* 2023, https://www.sciencedirect.com/science/article/pii/S2214629623001640.

[21] Congressional Research Service, "The American Climate Corps," March 19, 2024, https://www.congress.gov/crs-product/IN12334; H.R. 5572 - Civilian Climate Corps for Jobs and Justice Act, https://www.congress.gov/bill/118th-congress/house-bill/5572/all-info.

[22] F. Caiazzo et al., "Air pollution and early deaths in the United States. Part I. Quantifying the impact of major sectors in 2005," *Atmospheric Environment,* November 2013.

natural gas kills 91,000 people per year in the U.S., losses that come on top of hundreds of thousands of cases of childhood asthma and other preventable illnesses.[23]

The health benefits of cleaner air are sometimes termed "co-benefits" of climate policy. Depending on the valuation techniques used, their dollar value can be comparable to the climate benefits.[24] The climate benefits of reducing fossil fuel emissions could equally well be described as co-benefits of clean air policies.

Environmental justice guarantee

Reductions in CO2 emissions will lead to reductions in emissions of hazardous co-pollutants as well, but it is not necessarily the case that these will occur everywhere and at the same pace. "Hot spots" could persist where communities bear disproportionate pollution burdens. Indeed, some locations could experience increased emissions, even as overall emissions decrease nationwide, unless explicit provisions are in place to prevent this outcome. In California, for example, some communities saw increased emissions during implementation of the state's cap-and-trade program for CO2, as coal-fired electricity was replaced by more generation from natural gas plants sited closer to urban centers.[25]

To prevent such unintentional outcomes in communities already overburdened by fossil fuel pollution, the phasedown policy should include an environmental justice guarantee. Such a guarantee can be found in the climate bill co-sponsored by Senator Chris Van Hollen and Congressman Don Beyer.[26] It mandates that air pollution monitors will be installed in overburdened communities, with real-time public reporting at the level of monitor and pollutant, and instructs the EPA to take corrective actions whenever co-pollutant emissions in these communities do not decline at the same rate as the overall carbon emissions trajectory.[27]

Antecedents

The policy outlined above draws upon several earlier laws and proposals. These include:

- ***Alaska Permanent Fund***

The Alaska Permanent Fund was established in the 1980s under Republican governor Jay Hammond when oil extraction began on Alaska's North Slope. Its underlying premise is that Alaska's oil belongs equally to all residents. The state government charges a royalty on each barrel pumped and deposits the proceeds into the Permanent Fund, which pays equal dividends annually to every Alaskan. In recent years, the dividends have averaged about $2,000 per person. Not surprisingly, this policy enjoys robust

[23] K. Vohra et al., "The health burden and racial-ethnic disparities of air pollution from the major oil and gas lifecycle stages in the United States," *Science Advances,* August 22, 2025, https://www.science.org/doi/epdf/10.1126/sciadv.adu2241.
[24] J.K. Boyce, "Distributional issues in climate policy: Air quality co-benefits and carbon rent," in G. Chichilnisky and A. Rezai, eds., *Handbook on the Economics of Climate Change,* 2020, https://www.elgaronline.com/edcollchap/edcoll/9780857939050/9780857939050.00007.xml.
[25] J.K. Boyce and M. Ash, "Carbon pricing, co-pollutants, and climate policy: Evidence from California," *PLoS Medicine,* 2018, https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002610.
[26] Healthy Climate and Family Security Act of 2024 https://www.congress.gov/bill/118th-congress/senate-bill/5495/text.
[27] N. Sheats, "Achieving emissions reductions for environmental justice through climate change mitigation policy," *William & Mary Environmental Law and Policy Review,* 2017, https://scholarship.law.wm.edu/wmelpr/vol41/iss2/3/; J.K. Boyce, M. Ash, and B. Ranalli, "Can carbon pricing and environmental justice be reconciled?" *Global Challenges,* 2023, https://onlinelibrary.wiley.com/doi/full/10.1002/gch2.202200204.

public support regardless of party affiliation.[28] The Alaska Permanent Fund demonstrates the administrative and political feasibility of paying equal dividends to all residents. The main difference between the Permanent Fund dividends and Energy Security Cashbacks is that the cashbacks come from keeping oil *in the ground* rather than from extracting it.

- ***The Cantwell-Collins bill***

The Carbon Limits and Energy for America's Renewal (CLEAR) Act, a bipartisan bill introduced by Senators Maria Cantwell (D-WA) and Susan Collins (R-ME) in 2009, proposed to limit carbon emissions from fossil fuels, auction permits to the firms, return 75% of the money to the public as equal dividends per person, and put the remaining 25% into a Clean Energy Reinvestment Trust Fund that could be tapped by Congress for a variety of purposes.[29] The policy outlined here thus mirrors key provisions of the CLEAR Act. One difference is that the policy's Resilient Communities Fund is more specific as to the uses of the 25% of auction revenue not returned directly to households. Another is that the CLEAR Act contained a "price collar" for permit prices that could have blocked the timely achievement of the desired emissions reduction trajectory.

- ***The 2024 Van Hollen-Beyer bill***

The Healthy Climate and Family Security Act of 2024, co-sponsored by Senator Chris Van Hollen (D-MD) and Representative Don Beyer (D-VA), is the latest version of a bill that Van Hollen first introduced as a congressman in 2009. It includes a hard limit on carbon emissions (no price collar) and the environmental justice guarantee. The main difference from the policy outlined here is that the Van Hollen-Beyer bill directs 100% of the auction revenue to individual dividends, whereas this policy directs 25% to the Resilient Communities Fund in recognition of the fact that state and local governments as well as households will be impacted by the fossil fuel phasedown.

- ***Canada's Climate Action Incentive Payments***

Canada's federal government introduced a carbon price in 2019 in provinces that did not already have one, and mandated that the revenue be recycled to the public as "Climate Action Incentive Payments." In 2025 the policy was repealed after being attacked repeatedly by the Conservative opposition. A fatal weakness of the Canadian policy was the failure to make its benefits transparent to the public. Initially the payments were buried as a credit on income tax returns. After the method of delivery changed to automatic deposits, the entries appeared on bank statements inscrutably labeled "Canada Fed" or by

[28] T.J. Isenberg, "What a new survey from Alaska can teach us about support for basic income," Economic Security Project, June 28, 2017, https://economicsecurityproject.org/news/what-a-new-survey-from-alaska-can-teach-us-about-public-support-for-basic-income%EF%BF%BC/.

[29] See J.K. Boyce and M.E. Riddle, "CLEAR economics: State-level impacts of the Carbon Limits and Energy for America's Renewal Act on family incomes and jobs," Political Economy Research Institute, July 2011, https://peri.umass.edu/wp-content/uploads/2025/01/CLEAR_Boyce_Revised_July2011.pdf.

random sequences of numbers and letters.[30] This experience underscores the crucial importance of a *clear labeling requirement* for Energy Security Cashbacks.

- ***Hawaii's carbon cashback bill***

A bill now before Hawaii's state legislature would tax carbon where fossil fuels enter the state's economy, and return the money as tax credit to taxpayers and their dependents.[31] Unlike the policy outlined above, Hawaii's bill does not put a hard limit on emissions, although the tax could be expected to reduce emissions over time. As this example illustrates, there is scope for policies of this type at the state level as well as the national level.

The International Context

A key feature of the phasedown policy is that it benefits a decisive majority of American households financially as well as environmentally, as shown in Table 1. The financial payoffs of the policy make it feasible to win strong public backing like the support for Alaska's Permanent Fund. As the Canadian experience cautions, however, public support is not automatic; transparency and clear communication are essential too. For this reason, voter education and mobilization on behalf of the policy can yield benefits beyond its enactment.

The financial gains for households and communities mean that the phasedown need not await conclusion of an international agreement on how to apportion emissions reductions across countries. The domestic benefits of the policy alone are sufficient to justify its passage into law, regardless of the actions of other nations. Instead of U.S. policy being held hostage to an international climate accord, the sequence can be reversed with national policy coming first. Successful implementation of the policy could inspire other nations to follow suit, helping to break the international logjam, and transforming the United States from a climate laggard to a leader.

Border price adjustments

Because fossil fuel phasedowns will continue to be uneven across countries, energy-intensive trade-exposed industries may face competition from producers in foreign countries with weaker controls and lower fossil fuel prices. To level the international playing field, border carbon adjustments can be used to levy fees on carbon-intensive imports. The groundwork for these was laid by January 2026 legislation instructing the Department of Energy to carry out a study comparing emissions intensities in the production of energy-intensive goods at home and abroad.[32]

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[30] J.K. Boyce and O. Bradley, "Climate policy on thin ice: A lesson from Canada," *Common Dreams*, May 12, 2025, https://www.commondreams.org/opinion/cap-and-dividend-canada.

[31] "Relating to the Taxation of Pollution," SB685, https://www.billtrack50.com/billdetail/1789425. See also https://www.carboncashbackhawaii.org/.

[32] Bipartisan Policy Center, "Congress directs bipartisan study to show U.S. competitive edge in low-emissions production," February 13, 2026, https://bipartisanpolicy.org/article/congress-directs-bipartisan-study-to-show-u-s-competitive-edge-in-low-emissions-production/.

A benefit of the phasedown policy for U.S. exporters is that it will shield them from border carbon adjustments imposed by our trading partners, such as the Carbon Border Adjustment Mechanism implemented by the European Union in 2026.[33]

Concluding Remarks

The fossil fuel phasedown, paired with Energy Security Cashbacks and the Resilient Community Fund, is a climate defense policy that works for working Americans. It drives the transition to a net-zero carbon economy on a predictable timeline to address the greatest environmental challenge of our time. It benefits a large majority of Americans in straight-up pocketbook terms by returning the carbon permit auction revenue directly to them. It benefits communities throughout the land, including those most impacted by the fossil fuel industry, creating new jobs in cleaning up the damages of the past and building the free-range energy industry of the future. And it provides a model for other nations in pursuit of their own clean energy transitions.

What the policy will *not* do, however, is make anyone rich. It differs fundamentally from "realpolitik" policies like cap-and-giveaway-and-trade that attempt to lubricate the clean energy transition by proffering the carrot of windfall profits to fossil fuel corporations. This is the reason why past proposals for carbon dividends (what are here called Energy Security Cashbacks) have not gained decisive political traction, despite endorsements from thousands of economists.[34] No deep-pocket donors have stepped forward to bankroll public mobilization and lobbying for the policy, because no one apart from ordinary Americans will cash in on it.

The fossil fuel lobby, on the other hand, is flush with cash. A small fraction of the profits it extracts from working Americans has proven sufficient to purchase the loyalties of many politicians. Oil and gas corporations will try their utmost to defeat policies that prevent them from continuing to profit at the expense of current and future generations. The most potent weapon in the arsenal of the fossil fuel lobby has been fear of higher fuel prices. Spending on petroleum as a share of disposable income slid from five percent in the early 1980s to less than two percent today, thanks in part to advances in energy efficiency and renewables.[35] But the fear of higher gasoline prices still looms large in the minds of politicians and consumers alike. President Biden's chief of staff, Ron Klain, was reportedly so obsessed with this that he checked the gasoline price daily.[36]

But there is a world of difference between higher gasoline prices that swell the bottom lines of fossil fuel corporations as opposed to higher prices recycled to the public in Energy Security Cashbacks. With cashbacks, the American people are not just consumers; they also are the recipients of the revenue from permit sales. As we have shown, a sizeable majority of Americans stand to be net financial winners from the phasedown-plus-cashbacks policy.

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[33] European Commission, "Carbon Border Adjustment Mechanism (CBAM)," https://trade.ec.europa.eu/access-to-markets/en/news/carbon-border-adjustment-mechanism-cbam.
[34] "Economists' Statement on Carbon Dividends," https://clcouncil.org/economists-statement/.
[35] L. DePillis, "America depends less on oil than ever," *New York Times*, March 14, 2026, https://www.nytimes.com/2026/03/14/business/economy/america-oil-gas-energy.html.
[36] P. Baker and C. Krauss, "Biden accuses oil companies of 'war profiteering' and threatens windfall tax," *New York Times,* October 31, 2022, https://www.nytimes.com/2022/10/31/us/politics/biden-oil-windfall-tax.html.

For this fact to sink in, politically speaking, it is crucial that the cashbacks be just as visible to the public as the prices of gasoline advertised on street corners throughout the country. If this comes to pass, the day will come when the public's first reaction on encountering higher prices at the pump is to look forward to more money in their bank accounts.

The benefits of this policy are distributed across the country's entire population, rather than being concentrated in the hands of a few. The universality of Energy Security Cashbacks and the Resilient Communities Fund unites us rather than dividing us. For the same reason, the impetus to enact the policy can only come from a mobilized public, transmitted through leaders willing to put the people's well-being ahead of the vested interests of corporate oligarchs. In other words, the enactment of this policy will necessarily be a demonstration of the power of democracy.

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Appendix

The estimates presented in Table 1 were derived as follows:

Energy Security Cashback

All fossil carbon entering the U.S. economy will require permits. This includes fossil fuels consumed within the U.S. and fossil fuels extracted in the U.S. that are exported:

- Total CO2 emissions from fossil fuel combustion in the U.S. amounted to 4,772 million metric tons in 2024.[37]
- Total CO2 emissions from the combustion of fossil fuels exported from the U.S. in 2024 amounted to 2,110 million metric tons.[38]

The calculations for Table 1 assume that the number of permits is 92.6% of this amount (year one in the emissions trajectory that declines at 7.4% per year). The total number of permits is therefore: (4,772 million + 2,110 million)*0.926 = 6,375 million.

In the calculations we assume a permit price of $100 (the actual price will be determined in the permit auctions). Total auction revenue therefore is: 6,375 million*$100 = $637.5 billion.

Seventy-five percent of the auction revenue goes to Energy Security Cashbacks: $637.5 billion*0.75 = $478 billion. This is distributed equally per person to all U.S. residents, who numbered 342.4 million as of March 2026.[39] The annual cashback is: $478 billion/342.4 million = $1,398 per person.

Fuel price impact

The impact of permit costs on fuel prices will affect individual consumers in proportion to their own consumption of fossil fuels, both direct (in energy prices) and indirect (in the prices of other goods and services). Table 1 shows two scenarios: in the first, 100% of the cost is passed through to consumers; in the second, 70% is passed through.

Personal consumption accounts for roughly 80% of U.S. emissions, not including fossil fuel exports, and government consumption (local, state, and federal) for the remaining 20%.[40] (Adding exports to the total, the shares are 55% personal consumption, 14% government consumption, and 31% exports.) Total personal consumption is therefore: 4,772 million metric tons*0.8*0.926 = 3,535 million metric tons.

This amount is apportioned across expenditure deciles based on their shares of CO2 emissions per individual.[41] For decile *i*, the per-person fuel price impact with 100% passthrough is:

$$3{,}525 \text{ million metric tons} * e_i * \$100/\text{mt}/34.24 \text{ million individuals per decile}$$

where e_i = decile *i*'s share of personal emissions. The fuel price impact with 70% pass through is this amount multiplied by 0.7.

Net impact per person is the Energy Security Cashback minus the fuel price impact.

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[37] U.S. Energy Information Administration, "U.S. energy-related carbon dioxide emissions, 2024," May 29, 2025, https://www.eia.gov/environment/emissions/carbon/.
[38] Calculated from U.S. Energy Information Administration, "Monthly Energy Review, February 2026," Table 1.4b, https://www.eia.gov/totalenergy/data/monthly/pdf/mer.pdf.
[39] U.S. Census Bureau, https://www.census.gov/popclock/.
[40] J.K. Boyce and M.E. Riddle, "Keeping the government whole," Political Economy Research Institute, November 2008, https://peri.umass.edu/wp-content/uploads/2025/01/WP188.pdf.
[41] Calculated from A. Fremstad and M. Paul, "The impact of a carbon tax on inequality," *Ecological Economics,* 2019. Note: Because income inequality widened in recent years, the CO2 shares used in our calculations are likely to understate the cashback's progressivity.

Resilient Communities Fund

With an assumed $100/ton permit price in year one, and 25% of the revenue allocated to it, the total going into the RCF will be: $637.5 billion*0.25 = $159 billion.

Eighty percent of this – $127 billion – will be allocated to state and local governments on an equal per capita basis. This is equivalent to about $370 per person.

The remaining twenty percent – $32 billion – will go to assistance for carbon-intensive regions and communities most impacted by the fossil fuel phasedown and the environmental legacies of fossil fuel extraction and processing.

*For more information on this topic, including the **Policy Brief**,* please visit our policy page.

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