



The Challenge of Forging Sustainable Climate Policy



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Effective climate policy must be sustainable politically as well as environmentally. The environmental requirement – to limit emissions of carbon dioxide and other greenhouse gases so as to prevent massive destabilization of the Earth's climate – is often translated into the policy target of cutting emissions at least 80 percent against their 1990 level by the year 2050. Finding a comparable formula to meet the requirement for political sustainability has proven more elusive.

Establishing an effective climate policy is not just a matter of crafting a bill that can pass Congress. The policy must also win public support wide and deep enough to enable it to endure over the decades needed to complete America's transition to a clean energy economy. In other words, the policy must secure support among voters of all partisan persuasions comparable to that enjoyed by Social Security and Medicare.

To achieve this goal, we must move beyond past strategies that have tried – and failed – to forge a winning political coalition for the clean energy transition. These strategies started from a flawed but widely believed premise: the assumption that effective climate policy necessarily requires the present generation to make economic sacrifices in order to safeguard the climate for future generations. This framing has been espoused by environmentalists and fossil fuel firms alike. By ignoring possibilities to design clean energy policies that can benefit the present generation in the country – not only future generations worldwide – this "eat your broccoli" approach fatally undermines political support for effective climate policy.

Benefits Here and Now

Clean energy policy can bring tangible benefits here and now by three avenues:

- *Air quality:* Burning fossil fuels not only releases carbon dioxide, the principal greenhouse gas, but also emits hazardous pollutants – including sulfur dioxide, nitrogen oxides, particulate matter and carbon monoxide – that harm the health and economic well-being of all Americans, and particularly children

whose developing bodies and minds are most susceptible to their toxic impacts. By conservative estimates, Brandon Taylor and I found that an 80 percent reduction in the use of fossil fuels between 2016 and 2050 would prevent 700,000 premature deaths (an average of 20,000 per year), 43 million cases of asthma exacerbation, and 89 million lost school days due to respiratory ailments, with monetized benefits of \$56-160 billion per year. By designing policies to target substantial emissions reductions from sources that impact disadvantaged communities who now bear disproportionate pollution burdens, we can protect public health and advance the goal of environmental justice.

- *Employment:* Investments in energy efficiency and in clean energy infrastructure will create millions of new jobs for Americans. The job gains come about for two reasons: first, the technologies involved are more labor-intensive than fossil fuel extraction and processing; and second, the U.S. domestic share of their labor content is higher. In the U.S., investment in energy efficiency and clean renewables generates more than twice as many jobs per dollar than investment in fossil fuels.
- *Family income:* Last but not least, climate policy can directly put more money into the pockets of the majority of American households, protecting the real incomes of middle class and low-income households even in the face of rising fossil fuel prices. However, this can be done if, and only if, most or all of the revenue from carbon pricing is returned to the public in the form of equal dividends to every woman, man and child. How dividends work – and why they are essential for a sustainable climate policy – is the focus of this memorandum.

The Politics of Carbon Pricing

A crucial element of climate policy is to put a price on fossil carbon via a fee or cap-and-permit system, so as to limit demand and provide incentives for energy efficiency and alternative energy investments. Carbon pricing poses a great political challenge: how to sustain public support for a policy that significantly increases fossil fuel prices, including the most visible price in America – the price of gasoline that is advertised in foot-high numbers on street corners across the country.

The good news is that there is a policy design that can meet this challenge – one that returns the money generated by carbon pricing to the people as dividends (or what economists call "lump sum payments"). Dividend payments would be highly visible and would ensure that a substantial majority of Americans benefit from climate policy in sheer pocketbook terms: what they receive in dividends would exceed what they pay in higher prices. In my view, this is essential to build durable public support for the climate policy.

The bad news is that these advantages come with an opportunity-cost flip side: every dollar returned to the people as dividends means one less dollar available for the pet priorities of special interests. Legislators and lobbyists of all stripes may not agree on much, but one thing on which they do agree is that they have better

uses for money than simply handing it over to the people. Of course, they disagree sharply on exactly what these "better uses" would be. Environmentalists want to use the money for clean energy and other environmental objectives. Liberals want to use it for social programs and targeted assistance to those who are most in need. Conservatives want to use it to cut the national debt. Energy corporations want to divert it into windfall profits via a cap-and-giveaway (aka cap-and-trade) policy that gives them free permits. Many economists want to use it to cut "distortionary" taxes on the grounds that this will create a bigger economic pie.

As each champions their own special interests, none champions dividends. Meanwhile advocates for the public interest in a durable climate policy that brings economic benefits to the majority of Americans have been, with a few laudable exceptions, missing in action. Because no lobbyists represent the people, they must represent themselves. This turns out to be a tall order.

Carbon Rent

"By imposing a tax on every American who drives a car or flips on a light switch," [House speaker John Boehner declared](#) during the debate on the Waxman-Markey bill in 2009, "this plan will drive up the prices for food, gasoline and electricity." The *Wall Street Journal* dubbed cap-and-trade "[the biggest tax in American history.](#)" Democrats countered that the proposed cap-and-trade system wasn't really a tax, and that the resulting price increases would be so small they really wouldn't hurt.

A favorite number cited by the bill's supporters was that it would cost American households only 18 cents a day, "less than the cost of a postage stamp." But this claim rested on either confusion or disingenuity. The 18 cents figure came from a Congressional Budget Office (CBO) estimate of the cost of *preventing* emissions—for example, by insulating buildings or switching to clean energy. But carbon pricing means paying for emissions that are *not* prevented. The CBO estimated that the cost of preventing emissions in 2020 would have been about 18 cents per household per day. The same report estimated that the annual cost from fuel price increases would have been about \$1000 per household in 2020, increasing subsequently as the emissions cap tightened.¹

Resources used to prevent emissions, for example by installing insulation or solar panels, are not available for other uses. These resource costs are likely to be modest, as the CBO calculations indicate. Indeed some technologies to reduce emissions would *save* money.² The money that consumers pay in higher prices, in contrast is not spent on resources but simply transferred. It is *carbon rent*: payment for use of the limited carbon absorptive capacity of the biosphere.

Who will pay carbon rent is a matter of fairly simple economics. If the price is levied on firms that bring fossil fuel into the economy – an "upstream" system that minimizes administrative cost – it will be passed on to consumers. This is desirable as well as inevitable, since the resulting price signals guide consumption and

investment decisions. Because upper-income households generally consume more than middle and lower-income households, they will pay more. But because fuels are a necessity rather than a luxury, middle and lower-income households will pay more as a *percentage* of their incomes. Carbon pricing itself is therefore regressive, hitting the poor harder than the rich.

Who will receive carbon rent depends on the policy design. Underlying this question is the deeper question of who owns the carbon absorptive capacity of the biosphere. The fossil fuel corporations? The government? Or the people?

Tax or Cap?

A carbon price can be implemented either by means of a tax or a cap. A tax sets a fixed permit price (one permit = one ton of fossil carbon) and lets the quantity vary. A cap sets a fixed ceiling on the quantity of permits and lets the price vary. Apart from this, they are equivalent. Both put a price on carbon and therefore create carbon rent. In both cases, this rent can be returned to the people as dividends. The bills recently introduced in Congress by Representatives James McDermott (D-WA) and Christopher Van Hollen (D-MD) would do this via a carbon tax and a carbon cap, respectively.

Cap proponents worry that a tax will be set too low to ensure adequate reductions in emissions. Tax proponents worry that a cap would be set too loosely to ensure adequate increases in fossil fuel prices. These worries could be addressed by a hybrid policy that combines a price floor (the tax) with a quantity ceiling (the cap). For example, Switzerland's CO₂ law sets a carbon tax rate that increases whenever emissions reductions fall short of quantitative targets; the amount of the increase is calibrated to the extent of the shortfalls.

Alternative Uses of Carbon Rent

I have alluded to three reasons why dividends are preferable to other uses of carbon rent. First and foremost, dividends alone can ensure durable public support for climate policy in the face of rising fossil fuel prices. Second, proponents of other uses cannot agree on the best alternative. Third, whatever the merits of other uses, carbon pricing is a regressive way to fund them.

In addition, the merits of many other uses are questionable.

- *Environmental expenditures:* At first blush it may seem that devoting carbon rent to expenditures to wean the economy from fossil fuels would speed the clean energy transition. But as long as the policy puts a hard cap on the use of fossil fuel, this spending would have no effect on total emissions. If we use the money to subsidize the purchase of more efficient electrical appliances, for example, this relieves pressure on the cap and creates more space for emissions from other sources, such as transportation fuels. In other words, earmarking carbon rent for carbon reductions is redundant. Using the money for other environmental purposes not covered by the cap would avoid redundancy but leave

open the possibility of fungibility insofar as that spending otherwise would have been funded from other sources.

- *Means-tested payments to households:* Some liberals advocate returning carbon rent only to households who need it. The Waxman-Markey bill, for example, allocated 15 percent of the carbon rent to low-income households. While such a provision would mitigate the regressive impact of carbon pricing, it would raise administrative costs by imposing eligibility tests and raise political costs by excluding the middle class. If, instead of universal coverage, Social Security and Medicare were restricted to low-income households, it is not evident that they would still exist.
- *Reducing debt:* Some conservatives advocate using carbon revenue to pay down the federal government's debt. This is premised on the beliefs that the U.S. debt/GDP ratio is so high that it weakens the economy. Although the ratio has risen over the past decade, propelled by massive expenditures for the wars in Iraq and Afghanistan, it remains far below the level of the 1940s, when rather than weakening the economy debt-financed government spending stimulated it. This does not mean that the sky is the limit for government debt, only that we are nowhere near the sky.
- *Windfall profits:* The political rationale for free permit giveaways to fossil fuel corporations is that letting them capture the carbon rent as windfall profits will neutralize their opposition to climate policy. How well this works can be gauged from the serial failures of cap-and-giveaway proposals in Washington. Some of the windfall profits would go to foreign firms and shareholders, leaving the U.S. Giveaway requires permits to be tradable, creating scope for speculation and trading profits that drive a further wedge between the carbon rent paid by consumers and the amount available for other uses.
- *Cutting "distortionary" taxes:* Some economists call for using carbon rent to cut personal and/or corporate income taxes on the grounds that this will grow the economy. Apart from the fact that this would replace progressive taxes with regressive ones, the ostensible economic payoff rests on shaky grounds since it is premised on the assumption that by reducing incentives to supply of labor and capital, income taxes reduce GDP. This would make sense in a theoretical economy where labor and capital are fully employed – if we accept the proposition that Americans would be better off working longer hours – but in the real economy, characterized by chronic unemployment (aka excess supply of labor) and capital underutilization, it doesn't.

Keeping Government Whole

There is one alternative use for carbon rent for which a good case can be made, though oddly, few have made it: keeping the government whole. Consumers account for only two-thirds of U.S. carbon emissions, through their direct and indirect consumption of fossil fuel. Most of the rest – about one quarter of the nation's total

carbon footprint – is accounted for by local, state and federal government. A reasonable case can be made for using part of the carbon rent to protect the purchasing power of governments, while at the same time giving governments price incentives to reduce their use of fossil fuels, just as in the case of individuals.

On the other hand, small government advocates might view the reduction in real government expenditure by carbon pricing as a desirable outcome. The Van Hollen bill, which would distribute 100 percent of the carbon rent to individuals as non-taxable dividends, would have this effect. Politically, taxing governments and returning the money to the people could be a selling point for Republicans. But as far as I can tell, they haven't noticed.

There are two ways to tap carbon rent to keep government whole. One is to take a slice off the top, allocating 25 percent to government and 75 percent to dividends, as was proposed in the 2009 Cantwell-Collins bill. The other is to make the dividends to individuals taxable. Both would generate roughly the same amount of revenue. An attraction of taxable dividends is that much of the revenue would come from progressive income taxation rather than regressive carbon taxation. A potential attraction of the off-the-top option is that the revenue could be earmarked for certain purposes (the list of eligible uses specified in the Cantwell-Collins bill, for example, included transitional adjustment assistance for workers and communities, and international climate mitigation and adaptation assistance).

In either case, mechanisms would need to be established to share the revenue among local, state and federal governments in rough proportion to their carbon footprints. In designing these, a case can be made for allocating more revenue to states with more carbon-intensive electricity sectors. Retaining 25 percent of the carbon rent for governments would create opportunities to channel funds to local school boards, community benefit funds, and a "worker Superfund" to support a just transition for those now employed in the fossil fuel sector – uses that could broaden the policy's appeal to important constituencies.

Dividends by Democracy

In 2009 I participated in a conference call of progressive climate advocates who were weighing whether to fall into line behind the Waxman-Markey "cap and trade" bill or instead support the Cantwell-Collins bill mandating dividends. The Waxman-Markey proponents insisted that without giveaways to polluters no bill could win backing from the fossil fuel lobby. What about backing from the American people? I asked. They patiently explained that in Washington it is lobbyists who command votes, not voters. My response was, "Let us assume a democracy." This provoked much laughter.

Climate policy advocates appear to face a no-win tradeoff when it comes to carbon rent: pander to special interests to win passage in the short term, or return the money to the public as dividends to secure the durability in the long term. The first choice is a recipe for long-term failure. The second is a recipe for short-term failure.

The only exit from this box, in my view, is to mobilize the American people for a price-and-dividend policy. Unless and until the public demands it, we will never get it. And unless we get it, we will not have a politically sustainable climate policy. The picture is as simple – and as complicated – as that.

We cannot assume a democracy. Nor is democracy secured simply by the words written in our nation's Constitution. For democratic rights to be real, they must be exercised. This is hard work. But if forging an effective climate policy requires the renewal of American democracy, maybe that's not a bad thing.

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¹CBO, "[The Estimated Costs to Households from the Cap-and-Trade Provisions of H.R. 2454](#)," June 19, 2009. For discussion, see James K. Boyce and Matthew Riddle, [Cap and Dividend: A State-by-State Analysis](#). Amherst, MA: PERI, November 2010.

²See McKinsey & Co., [Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost?](#) December 2007.