

WHAT WE CAN LEARN FROM THE GREEN NEW DEAL ABOUT THE IMPORTANCE OF EQUITY IN NATIONAL CLIMATE POLICY

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INTRODUCTION

Market-based instruments have played an important role in addressing environmental externalities (Aldy, 2020; Stavins, 1998), and there is no question that a national carbon tax or cap-and-trade program could reduce carbon emissions. The argument for pricing carbon, as opposed to using other strategies to mitigate emissions, rests on the assumption that our main objective should be economic efficiency. Judged by this criterion alone, a carbon tax or a cap-and-trade system, if designed optimally, are each cost-effective approaches. Economists have vigorously debated over the past 30 years the relative merits, under conditions of uncertainty, of one type of market-based carbon instrument over the other or how to design one type of instrument so that it seizes the advantages of the other (see, e.g., Goulder & Schein, 2013; Nordhaus, 2007; Pizer, 1999). Notwithstanding these debates, many academics, policymakers, and practitioners agree that placing a price on carbon has distinct advantages over a regulatory approach. Despite long-standing conventional wisdom that a carbon price would be part of any national climate policy, Congress has yet to enact one. In the midst of ongoing scholarly and policy debates about a carbon price, the political momentum for something more comprehensive emerged with the introduction of the Green New Deal.

The Green New Deal (GND) begins from a different starting point. The premise of the GND, as introduced by Representative Alexandria Ocasio-Cortez (D-NY) and Senator Ed Markey (D-MA) as a nonbinding resolution in the 116th Congress, is that comprehensively addressing the climate crisis requires more than just cost-efficient mitigation strategies, it also requires centering equity and justice in our response. The GND recognizes that the burdens of our historical reliance on fossil fuels have been disproportionately borne by people of color, low-income, and other vulnerable groups of the U.S. population, and the transition to cleaner sources of energy will also create hardships for many of the same people. In this respect, although the GND is vague about many things, including which mitigation policies to pursue and the sources of revenues to fund such a massive federal effort, its focus on equity and justice as a commensurate priority to carbon mitigation, sets it apart from past policy proposals.

In this article, we argue that the GND is right to emphasize equity and justice as a key component of a broader strategy on climate change and energy transitions. Existing energy systems have exacerbated economic, social, and racial disparities across the United States, and energy systems of the future will continue to do so without concerted and targeted equity efforts (Carley & Konisky, 2020). A policy strategy that incorporates equity and justice into climate policies can help assure that mitigation strategies are not just efficient and distributionally neutral, but effective in recognizing and addressing past disproportionate burdens and preventing new ones from emerging. We agree with our esteemed colleagues Carolyn Fischer and Grant Jacobsen (2021) that carbon pricing has an important role to

play—though we acknowledge some notable drawbacks—but we argue that it alone cannot achieve broader equity and justice goals. Carbon pricing policies are best as part of a broader package of policy efforts, including, but not limited to, policies targeting existing and growing sociodemographic disparities.

THE CASE FOR WHY EQUITY SHOULD BE A KEY CRITERIA AND OBJECTIVE FOR ENERGY POLICY

Environmental justice emerged on the U.S. national policy agenda in the 1980s, following both growing evidence that communities of color and low-income communities experience disproportionate environmental burdens and a burgeoning environmental justice movement that demanded governments respond. Despite growing understanding of the patterns of disparities (Mohai, Pellow, & Roberts, 2009; Ringquist, 2005) and their causes (Banzhaf, Ma, & Timmins, 2019), the public policy response has been both slow and ineffective. Federal agencies, such as the U.S. Environmental Protection Agency, have not actively pursued environmental justice solutions, due to a combination of limited political will, capacity, and authority (Konisky, 2015) and organizational cultures that neither prioritize nor often respect environmental justice goals (Harrison, 2019).

In recent years, scholars and advocates alike have focused more attention to inequities generated from the current energy system, and especially to the anticipated uneven impacts of climate change (e.g., flooding, urban heat islands, sea level rise). While the U.S. energy system is undergoing a transition toward low-carbon and more efficient energy resources (Sovacool, 2016), energy-related and -induced disparities will not fade. The energy transition has its own set of accompanying equity and justice dimensions (Carley & Konisky, 2020). Those who work in legacy fossil fuel industries, for example, such as coal miners or coal power plant operators, will disproportionately lose their jobs (Jolley, Khalaf, Michaud, & Sandler, 2019); those who live in communities that traditionally rely on fossil fuel tax revenues for local public and social services will lose these services (Haggerty, Haggerty, Roemer, & Rose, 2018); those who reside near new energy developments will bear the local negative externalities of their siting (Outka, 2012; Welton & Eisen, 2019); those who already struggle to pay their energy bills will face the threat of disconnection if and when energy prices rise (Memmott, Carley, Graff, & Konisky, 2021; Reames, 2016); those low-income households that cannot pay for more expensive but “greener” technologies such as electric vehicles, efficient appliances, and solar panels will not benefit from the associated tax benefits or energy savings (Borenstein & David, 2016; Sunter, Castellanos, & Kammen, 2019). In many cases, these disadvantaged populations are the same ones who have suffered from disparities of the existing energy system, including its externalities and exclusive decisionmaking, and they are the same groups that suffer from broader social problems such as lack of economic opportunity, food insecurity, and healthcare access.

Pursuit of energy and climate policies with an objective of equity and justice means recognizing a history of these disparities and their intersections with broader societal problems, and establishing a commitment to rectify them. In practice, this means designing policy that prioritizes human values and dignity—for all humans, not just those who can pay. This perspective is at the core of the GND.

WHY EQUITY CANNOT JUST BE A DESIGN FEATURE OF CLIMATE POLICY

A carbon tax or cap-and-trade program is the first-best solution for the U.S. to reduce the emissions of carbon dioxide and other greenhouse gases causing climate change. We agree with Fischer and Jacobsen (2021) that the theoretical economic case for a

carbon price is strong, which in part explains its widespread support among many academics (economists and non-economists) and practitioners, and both conservatives and liberals alike.

Carbon pricing in practice, however, suffers from two major downsides. First, carbon pricing regimes established around the world over the past 30 years do not have a record of achieving large emissions reductions. One recent review of empirical analyses determined that carbon pricing has generated annual emissions reductions of just zero to 2 percent, with some evidence that carbon taxes perform better than cap-and-trade programs (Green, 2021). These levels of emissions reductions pale in comparison to what is needed to address the climate crisis. As Fischer and Jacobsen (2021) note, the poor overall record of carbon pricing may not be an indictment of the policy tools themselves, as much as their weak design when put in use. For a carbon tax to move energy markets and behavior, prices need to be set high enough, and for emissions trading systems to do the same, emissions caps must be set low enough to matter and be accompanied by price controls such as a price collar. Getting the design right can introduce delays in policy impacts, sometimes up to decades. In addition, such policy adjustments over time require future policymakers to have a long-term appetite for carbon pricing policies and be responsible for making them more stringent, since political feasibility is not just an issue at policy adoption but also runs through the full policy cycle of implementation and amendment (Rabe, 2018).

Second, carbon pricing regimes tend to be less popular among the American public than alternative policy instruments. Although there is some evidence of growing public concern about climate change, attitudes remain deeply split along partisan lines (Egan & Mullin, 2017). Moreover, public support for energy and climate policies wane when the costs are made explicit. For example, carbon and gas taxes tend to garner less support compared to direct regulation of emissions, energy efficiency programs, and investment in renewable energy development, and these decreases in support are similar in magnitude for Democrats and Republicans (Bergquist, Konisky, & Kotcher, 2020). Although public attitudes could change, and Congress could certainly design policies to offset higher costs on energy such as dividends, raising costs on energy has not been an easy sell for policymakers in Washington for decades (Graetz, 2011).

Neither of these downsides is a reason alone to dismiss carbon pricing, but both may introduce significant delay into actual climate policymaking, and in a situation in which time is of the essence. To achieve net zero emissions by 2050, let alone interim goals such as a 45 percent decline from 2010 levels by 2030 to keep warming at 1.5 degrees C (IPCC, 2018), immediate reductions are necessary. Of course, the United States alone cannot reduce enough emissions to meet this goal, but the U.S. does still emit about 15 percent of the global total of carbon, and, historically, it has contributed about 20 to 25 percent of all greenhouse gas emissions, creating a moral imperative to act.

The U.S. federal government has repeatedly entertained the idea of adopting a carbon price over the past two decades but has consistently failed to do so, even during periods of a democratically-controlled Congress and presidency. During this time, over half of the states—representing the majority of the country's population—have adopted clean energy standards, and consistently increased the stringency of those standards over time. Such mandates are a second-best approach to reducing carbon emissions. They cost more per unit of saved emissions than an effectively designed carbon price would, and are themselves subject to difficult politics that can result in policy retrenchment (Stokes, 2020). Yet, by one scholar's estimate, these standards accounted for 58 percent of new total non-hydroelectric renewable energy capacity between 1998 and 2014 (Barbose, 2015) and have been important drivers of

utility-scale clean energy deployment and resulting cost decreases for these technologies (Carley, Davies, Spence, & Ziogiannis, 2018).

Obstacles to carbon pricing are significant, and may provide reason enough to consider alternative strategies. Of course, putting in place any national climate policy is challenging. Regulatory approaches are also fraught with political and legal obstacles, which the recent case of the EPA's Clean Power Plan has made all too clear. But, more central to our argument here, even a well-designed carbon price is likely to fall short of meaningfully achieving broader equity and justice goals.

Fischer and Jacobson (2021) highlight two distributional questions related to carbon pricing strategies. First, how do such approaches affect the burden of pollution across different population groups? As they note, the empirical evidence on this question is limited. Studies of California's CO₂ cap-and-trade system have come to mixed results, with some work finding that it reduces pollution disparities (Hernandez-Cortes & Meng, 2021) and other research finding that it exacerbates them (Cushing et al., 2018). A second distributional question is how to offset the higher energy costs that will result from pricing carbon? Many carbon tax proposals, for example, include a dividend or rebate to return money to consumers so as to avoid the potential regressivity of a price on carbon. As Fischer and Jacobson (2021) note, some research suggests that a dividend can effectively offset higher energy costs, and may even be progressive for some households (Green & Knittel, 2020). Other approaches entail government strategically investing or redistributing the revenue it collects from a carbon pricing program. For example, the Regional Greenhouse Gas Initiative CO₂ cap-and-trade program redistributes revenue generated from auctioning permits to states to spend on renewable energy and demand-side energy efficiency programs. As another example, California redirects 25 percent of revenue it collects from its CO₂ cap-and-trade program to projects that provide benefits to environmental justice communities.

A carbon pricing strategy, thus, does not mean ignoring or abandoning equity and justice goals, as Fischer and Jacobson (2021) note. However, we argue that genuinely and comprehensively achieving energy and climate justice requires more than designing cost-effective emission mitigation strategies, even those that may effectively offset higher energy costs to consumers through a dividend or direct revenue to adversely affected communities or to investments in energy efficiency or renewable technologies. Rather, a comprehensive approach requires a broader strategy that recognizes explicitly past disparities and injustices and prioritizes efforts to ensure that the transition to a cleaner energy economy centers historically marginalized communities. Such an approach does not leave things to markets to generate, but instead targets these communities directly through policies, programs, and investments.

WHAT DOES THIS LOOK LIKE IN PRACTICE?

In our view, a national climate policy that centers equity and justice includes several pillars. First, there must be efforts to address historical, present, and future environmental and health burdens attributable to the energy system, from the point of extraction of resources through the siting of industrial facilities that use or generate energy. Second, national climate policy should prioritize the deployment of cleaner energy technologies (e.g., efficiency upgrades, solar panels, batteries, electric vehicles) to individuals, households, and communities that may not otherwise be able to access or afford them. Third, an equity- and justice-focused national climate policy should embrace a "just transition," through investment in communities that have historically relied economically (e.g., jobs, tax revenue) on fossil fuels, or communities whose economic fortunes are otherwise inextricably linked to fossil

fuels, such as the auto industry. Fourth, the uneven burdens of climate change itself must be addressed through investment in the resiliency of communities on the frontlines of its impacts, many of which are historically marginalized. And, finally, the United States must reform its political institutions and processes to facilitate more inclusive, community-driven decisionmaking. A key dimension of energy justice is that individuals and communities have more say in the decisions that affect them. This type of procedural justice is a core principle of environmental justice, and one that top-down, technocratic decisionmaking processes have not historically honored. The types of programs and investments required to achieve these pillars are not necessarily easy, elegant, or efficient, but that does not make them less desirable.

This list is not intended to be exhaustive, but rather illustrative of what a national climate policy that takes equity and justice seriously looks like. The GND calls for such an approach.

In addition to these efforts, we continue to support the adoption of an effectively designed carbon tax, and specifically one for which the revenue is at least in part used to redress disparities, extend technologies to underrepresented communities, ensure a just transition, and build community resilience to climate change. These policies can also complement technology standards that continue to drive clean energy technology growth, as well as innovation policies that support early stage decarbonization technologies and services. This approach recognizes implicitly that there are many energy challenges—climate change, equity, externalities beyond carbon associated with fossil fuel technologies, and the need for more innovation—which require several policy solutions. As is the case with climate prices and technology standards, however, the devil is in the design details, and it is essential to design each policy carefully and in coordination with the others.

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