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The Ends and Means of Decarbonization: The Green New Deal in Context

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Disputes about climate policy involve much more than whether or not to reduce greenhouse gas emissions. There is general agreement among proponents of climate policy that strategies should be cost effective, address distributional impacts, and incentivize investments in low-carbon technologies. Yet disagreements abound regarding additional goals of climate policy design.

Decarbonizing the economy means changing the sources of energy we use, how we transport people and products, how we produce food, and which resources we consume. Yet even among proponents of federal climate legislation there is strong disagreement regarding policy instruments. Recent proposals for a revenue-neutral carbon tax and a Green New Deal (GND) frame the opposite ends of the debate. On one end, the GND framework treats climate policy as an opportunity to steer the trajectory of the U.S. economy while also correcting social and environmental injustices. Proponents of the most expansive iterations of a GND argue that it is not possible to separate justice and economic considerations from environmental policy. At the other end of the spectrum, revenue-neutral carbon tax proposals reject the creation of new government programs and focus on controlling greenhouse gas emissions rather than the economic and social impacts of the policy.

This Essay identifies core disputes about the non-emission goals in state and federal climate policy debates that create barriers to legislative consensus. The Essay begins with a comparison of recent proposals to mitigate climate change, including pricing carbon via a carbon market or carbon tax, regulatory measures such as the Obama-era Clean Power Plan, state-based policies, and the GND. It then identifies three conflicts, the resolution of which will

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shape future climate policy developments: the role of decarbonization as technology policy, social justice policy, and fiscal policy. Deploying low carbon technologies is a critical piece of the climate mitigation puzzle, but stakeholders disagree whether decarbonization strategies should prioritize renewable energy or include technologies such as nuclear or carbon capture. Each policy discussed in this Essay considers some range of social impacts (at minimum, cost increases), but differ significantly about which social impacts to address and the how to address them. The policies also adopt different approaches to the link between fiscal policy and climate policy, with some generating revenue to fund new government programs, some returning revenue to U.S. citizens, and some not addressing the issue. The Essay concludes with comments about the early impacts of the GND on the domestic policy debate and opportunities to resolve it.

I. INTRODUCTION

In 2018, a new coalition of environmental and social justice advocates launched the Green New Deal (GND)—a sweeping framework to mitigate climate change, reduce unemployment, and address other longstanding social justice and environmental challenges. The GND quickly became a focal point in the climate policy debate as a new wave of congressional candidates gave voice to the ideas.[1]

The GND refocused national attention on climate change, but it also reinforced the lack of consensus about the proper approach to mitigate greenhouse gas (GHG) emissions. At the same time that the GND was emerging as a new force in the climate policy debate,

[1] *See, e.g.*, RHIANA GUNN-WRIGHT & ROBERT HOCKETT, NEW CONSENSUS, THE GREEN NEW DEAL 1 (2019), https://perma.cc/V7QB-KGGT (describing the origins of the GND).

bipartisan bills were introduced in the House and Senate as companion bills to create a national cap-and-dividend program that would tax carbon and redistribute the funds back to taxpayers—the first bipartisan climate bill introduced in the U.S. Congress since 2010.[2]

A coalition of companies, environmental organizations, and former elected officials and high-ranking cabinet officials released a proposal supporting a similar approach.[3] In January 2019, over 3,500 economists endorsed an editorial published in the *Wall Street Journal* promoting a similar idea.[4]

A revenue-neutral carbon tax and a GND reflect opposite ends of the climate policy spectrum. On one end, the GND framework approaches climate policy as an opportunity to steer the trajectory of the U.S. economy while also correcting social and environmental injustices. At the other end of the spectrum, revenue-neutral carbon tax proposals adopt a more traditional approach to environmental policy. These proposals focus on controlling a class of pollutants rather than the economic and social impacts of the policy.

The contrast between the GND and carbon tax proposals highlight a challenge that has long frustrated efforts to decarbonize the economy: some of the most consequential disagreements about climate policy are not simply about the best way to reduce the atmospheric concentration of GHGs. Instead, the conflicts are rooted in fundamentally different views of the role of government. Achieving the broad-based political coalition to move climate change legislation through Congress requires addressing these core conflicts.

Decarbonizing the economy means changing how we power the economy, transport people and products, produce food, and consume other natural resources. There is general agreement that climate policy should be cost effective, should address distributional impacts, and should incentivize investments in low carbon technologies. Yet disagreements abound regarding the scope of the problem and the appropriate responses. Should climate policy allow compliance flexibility or mandate emission reductions at each facility subject to the policy? Should climate policy directly address job losses that will occur as the

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[2] *See* Energy Innovation and Carbon Dividend Act of 2018, H.R. 7173, 115th Cong. (2018); Energy Innovation and Carbon Dividend Act of 2018, S. 3791, 115th Cong., 2d Sess. (2018); Noah Kaufman, A Comparison of the Bipartisan Energy Innovation and Carbon Dividend Act with other Carbon Tax Proposals 2, 4 (Columbia Univ., Ctr. on Glob. Energy Policy, Working Paper, 2018), https://perma.cc/6MMK-N68B. The bill was reintroduced at the start of the 116th Congress. Energy Innovation and Carbon Dividend Act of 2019, H.R.763, 116th Cong. (2019).

[3] *See The Four Pillars of Our Carbon Dividends Plan*, CLIMATE LEADERSHIP COUNCIL, https://perma.cc/N7Y9-KHFN (updated September 2019) [hereinafter CLC *Carbon Dividend Plan*].

[4] *Economists' Statement on Carbon Dividends*, WALL ST. J. (Jan. 16, 2019), https://perma.cc/73S3-KY9J. The Climate Leadership Council claims that this is "the largest public statement of economists in history." *Economists' Statement on Carbon Dividends*, CLIMATE LEADERSHIP COUNCIL, https://perma.cc/9H9S-EQ5X (last visited Nov. 25, 2019).

energy system moves toward a lower carbon future? Should decarbonization policy ensure that new infrastructure does not create long-term public health and environmental burdens for local communities? Perhaps most fundamentally, is decarbonization about pollution mitigation alone, or should it also address the social impacts resulting from the transition to a low carbon economy?

Policy debates often treat these as questions of strategy (in other words, the means of decarbonizing). This Essay argues that the disagreements reflect different views about the core goals of decarbonization rather than merely the strategies for reducing emissions. Different stakeholders expect fundamentally different outcomes and define success in sometimes vastly different terms. Some expect climate policy to correct past economic and environmental injustices. Some seek to rigidly define the scope of acceptable energy technologies while others are agnostic regarding technology choices as long as the policy results in lower overall GHG emissions over time. Some prioritize reducing economic burdens on the new policy but give less attention to other social goals.[5]

Proponents of the most expansive iterations of a GND argue that it is not possible to separate justice and economic considerations from environmental policy, and that politics and equity require addressing the economic impacts of climate policy as part of a comprehensive decarbonization effort.[6] Decarbonizing the economy necessarily means that some jobs will disappear and some communities will suffer economic blows. This is already taking place, as coal-fired power plants, and the mines supplying their coal, shutter due to low costs of natural gas and renewable energy.[7] The GND takes this challenge on directly by combining climate policy, economic development, and job guarantees.[8]

Carbon tax and cap-and-dividend proposals generally include provisions to help low-income citizens cope with higher energy prices resulting from the carbon price, but most do not focus on social, economic, or environmental justice issues.[9] For some, the narrow focus

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[5] This is not to suggest that proponents of different policy mechanisms care more or less about the particular goals. They may support all of the goals identified in this Essay but believe that it is a better strategy choice to address other goals using other policy mechanisms, for example.

[6] GUNN-WRIGHT & HOCKETT, *supra* note 1, at 7.

[7] ETHAN BLUMENTHAL, UNC CENTER FOR CLIMATE, ENERGY, ENVT., AND ECON., COMMUNITIES IN TRANSITION: STATE RESPONSES TO ENERGY-SECTOR JOB LOSSES 3–7 (2019), https://perma.cc/M7YM-PMW2.

[8] GREG CARLOCK & EMILY MANGAN, DATA FOR PROGRESS, A GREEN NEW DEAL 2 (2018), https://perma.cc/9LVQ-4T2S ("The goal of a Green New Deal is to build the 21st century economy, which by design will mitigate the causes of climate change while building resilience to its effects, restore the American landscape, and improve access to clean air and water—all in ways that prioritize justice and equity, and grow the economy and jobs.").

[9] *See, e.g.*, GEORGE P. SCHULTZ & TED HALSTEAD, CLIMATE LEADERSHIP COUNCIL, THE DIVIDEND ADVANTAGE 3 (2018), https://perma.cc/8EKG-WYKM (stating that "[c]ombining

on mitigating climate change may reflect a political calculation. Climate change is such a critical threat that a targeted response that has a better chance of collecting the necessary votes in Congress is a preferable option. For others, the focus on emissions reflects the view that the critical issue at hand is reducing emissions, not using climate policy as a legislative vehicle to tackle a host of other societal challenges. In other words, there is not consensus about whether some of the social justice issues included in the GND resolution are issues that government should address and, if they are, whether they should be directly linked to climate change mitigation.

The Essay begins with a comparison of recent proposals to mitigate climate change, including pricing carbon via a carbon market or carbon tax, regulatory measures such as the Obama-era Clean Power Plan, state-based policies, and the GND.[10] It then discusses three important conflicts, the resolution of which will shape future climate policy developments: the role of decarbonization as technology policy, social justice policy, and fiscal policy. Deploying low carbon technologies is a critical piece of the climate mitigation puzzle, but stakeholders disagree whether decarbonization strategies should prioritize renewable energy or include technologies such as nuclear or carbon capture. Each policy discussed in this Essay considers some range of social impacts (at minimum, cost increases), but they differ significantly about which social impacts to address and the how to address them. The policies adopt different approaches to the link between fiscal policy and climate policy, with some explicitly using revenue to fund new government programs, some explicitly rejecting creation of new government programs, and some not addressing the issue. The Essay concludes with comments about the early impacts of the GND on the domestic policy debate. Whether one agrees with the GND framework or not, the proposal helped launch the most serious national debate about climate policy since the U.S. House of Representatives passed climate legislation in 2009.[11] The long-term impact of the GND will depend on whether its

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carbon fees with dividends solves [the problem of imposing a disproportionate burden on the least fortunate] and ensures that the most vulnerable come out ahead").

10 This Essay focuses on state and federal policies specifically targeting greenhouse gas (GHG) emissions, but the list only scratches the surface of policy options for mitigating climate change. For example, renewable energy mandates are important elements in New York's and California's pledges to reach carbon neutrality before the middle of the 21st century. Jaclyn Brandt, *New York Governor Unveils Plan to Double Solar Goal and Expand Wind*, DAILY ENERGY INSIDER (Jan. 17, 2019), https://perma.cc/E35M-MD6X ("The cornerstone of this new goal is an increase of New York's successful Clean Energy Standard mandate from 50 percent to 70 percent renewable electricity by 2030." (quoting New York Gov. Andrew Cuomo)); California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases, S.B. 100, 2017–2018 Leg. (Cal. 2018). A new book published by the Environmental Law Institute catalogues "over one thousand legal options" to reduce U.S. GHG emissions. LEGAL PATHWAYS TO DEEP DECARBONIZATION IN THE UNITED STATES 1 (Michael B. Gerrard & John C. Dernbach, eds., 2018).

11 *See, e.g.*, Dino Grandoni, *The Energy 202: 'Let a Thousand Climate Proposals Bloom.' Lawmakers Tee Up GND Alternatives*, WASH. POST: POWER POST (Mar. 26, 2019),

proponents treat the framework as a single, comprehensive legislative package or as a set of goals that could apply to different types of policy proposals.

II. DEFINING THE GREEN NEW DEAL

The dominant paradigm for climate policy design assumes that there is agreement on the end goals (decarbonization), and the disagreements involve differing viewpoints regarding policy instruments (e.g., carbon taxes, cap-and-trade programs, mandates, etc.), scope (e.g., sector-specific or economy-wide), stringency, and timelines. Climate policy options are often evaluated based on their impacts on environmental performance, cost effectiveness, distributional impacts, and political viability. Many stakeholders often rely on economic modeling to assess the costs and impacts of different GHG-reduction pathways and use the results to support a particular emission reduction strategy.

The GND starts from a different place. Rather than focusing primarily (or exclusively) on pollution abatement, the GND approaches the challenge of climate change as part of a much broader socio-economic challenge.[12] GND advocates argue that the energy system and the economy are at a turning point, and seek to steer both arenas toward a more just, lower carbon future. The strategy combines the need to address climate change, the economic opportunities created by developing and deploying a new generation of energy technologies, the historic exclusion of many communities in environmental policy design, and the need for stable employment with meaningful wages and benefits.

As of the drafting of this Essay, the GND is a conceptual framework rather than a fully formed legislative proposal. GND proponents in Congress have yet to specify how they would address the challenging fiscal and social tradeoffs inherent in such a broad policy change such as the role of nuclear power, the policy mechanisms to achieve the emission reductions, and how to fund the proposals.

As a result, the GND acts like a climate version of a Rorschach test, with proponents and opponents seizing on certain details (or lack thereof) to extrapolate what the entire concept stands for, from a call for 100% renewable energy to hyperbolic claims that the GND is a "Trojan Horse for socialism," or that it will require everyone to become vegetarians and cease all air travel.[13] It is also unclear at this stage

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https://perma.cc/KY4K-VPEA; American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong., 1st Sess. (2009).

[12] CARLOCK & MANGAN, *supra* note 8, at 1 (characterizing the GND as "a transition to the 21st century economy").

[13] *See* Annalee Monroe, *President Trump is Partly Right About the Democrats' Green New Deal*, ARIZ. CENT.: FACT CHECK, https://perma.cc/3N97-2VPB (last updated Mar. 18, 2019); David Harsanyi, *The 10 Most Insane Requirements of the Green New Deal*, THE

whether the GND is a specific proposal or a set of guiding principles to inform energy, environmental, and social policy at all levels of government. The distinction matters. If the GND is a set of guiding principles, policymakers can approach the GND in steps and incorporate the goals into numerous existing policy proposals. If it is a single policy proposal, the success or failure depends on the ability to move a specific legislative package through the U.S. Congress or state legislatures.

The lack of details did not prevent the idea from breathing new life into the domestic climate policy debate, however. Almost as soon as the GND entered the national conscience, the race was on to define it. An early GND outline released by the Sunrise Movement, a leading proponent of the GND (and youth movement), advocated for Congress to create a new "select committee" to develop draft legislation to implement the GND.[14] The Sunrise Proposal called for "[d]ramatically expand[ing] existing renewable power sources and deploy[ing] new production capacity."[15] Although it calls for "meeting 100% of national power demand through renewable sources," the proposal does not require that outcome.[16] Other language calls for "eliminating greenhouse gas emissions" from transportation, manufacturing, agriculture, "and other industries," but the provisions do not specify technologies for achieving the goals.[17]

Representative Ocasio-Cortez and Senator Markey introduced a non-binding congressional resolution in February 2019 that incorporated much of the Sunrise Foundation's framework.[18] The resolution's "whereas" clauses point to declining life expectancy, wage stagnation, a range of social and economic injustices, and threats to national security.[19] Responding to these challenges, the GND calls for a "10-year national mobilization" to achieve net-zero GHG emissions, create jobs, invest in sustainable infrastructure and industries, secure clean air and water (and other necessities to ensure health and environmental protection), and promote justice and equity.[20]

FEDERALIST, https://perma.cc/3K89-URP7 (last visited Oct. 17, 2019); Thomas J. Donohue, *The Green New Deal Is a Trojan Horse for Socialism*, U.S. CHAMBER OF COMMERCE (Feb. 18, 2019), https://perma.cc/AAU2-VG42.

14 DRAFT TEXT FOR PROPOSED ADDENDUM TO HOUSE RULES FOR 116TH CONGRESS OF THE UNITED STATES, https://perma.cc/CK46-RJVU; *see also Alexandria Ocasio-Cortez's Platform*, OCASIO 2018, https://perma.cc/9DVN-6UMT (last visited Oct.15, 2019) (U.S. Rep. Alexandria Ocasio-Cortez incorporated the GND into her campaign platform).

15 DRAFT TEXT FOR PROPOSED ADDENDUM TO HOUSE RULES FOR 116TH CONGRESS OF THE UNITED STATES, *supra* note 14, § (6)(A)(i) (Committees, Commissions, and House Offices).

16 *Id.*

17 *Id.* § (6)(A)(iv)–(v) (Committees, Commissions, and House Offices).

18 Recognizing the Duty of the Federal Government to Create a Green New Deal, H.R. Res. 109, 116th Cong., 1st Sess. (2019) [hereinafter Ocasio-Cortez–Markey GND Resolution].

19 *Id.* at 3–4.

20 *Id.* at 5–6.

References to the GND in this Essay refer to the Ocasio-Cortez–Markey Resolution unless otherwise noted, but it is far from the only version. Thomas Friedman proposed a GND in a 2007 New York Times column.[21] President Barack Obama incorporated the concept into his 2008 presidential campaign and incorporated elements of a GND approach into the 2009 American Recovery and Reinvestment Act by linking economic recovery with large investments in clean energy technologies.[22] Numerous commenters have published recent editorials promoting various strategies for the GND.[23] Proponents, critics, and 2020 Democratic presidential candidates continue debating the proper scope of a GND and the merits of policy ambition versus pragmatism.[24] New York adopted a narrower GND strategy that promotes renewable energy and energy innovation and articulates a list of specific policy goals.[25] The state strategy follows recent announcements that the renewable energy would make up seventy percent of the state's electricity mix by 2030 and that the electricity sector would be carbon-neutral by 2040.[26]

III. THE GREEN NEW DEAL IN THE CONTEXT OF U.S. CLIMATE POLICY

The GND refocused national attention on climate change in the early days of the 116th Congress, but it also highlights the lack of consensus about the core goals for climate policy. As the GND entered the nation's lexicon, the Climate Leadership Council (CLC)—a bipartisan advocacy group with corporate members as well as prominent scientists, economists, and former high-ranking government officials—called for implementing a national carbon tax that returned tax revenue to U.S. citizens.[27] Lawmakers in the House of Representatives and

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[21] Thomas L. Friedman, *A Warning from the Garden*, N.Y. TIMES (Jan. 19, 2007), https://perma.cc/M2CB-94AT.

[22] David Roberts, *The Green New Deal, Explained*, VOX, https://perma.cc/R5FX-6V8V (last updated Mar. 30, 2019) (providing a brief summary of the evolution of the GND concept).

[23] *See* Noah Smith, *The Green New Deal Would Spend the U.S. Into Oblivion*, BLOOMBERG (Feb. 8, 2019), https://perma.cc/5XK9-5TBT; Thomas L. Friedman, *The Green New Deal Rises Again*, N.Y. TIMES (Jan. 8, 2019), https://perma.cc/23DL-UD8Z.

[24] Samuel Whillans, *Many Shades of the Green New Deal*, THE REGULATORY REVIEW (Dec. 12, 2019), (describing Democratic presidential candidates' climate platforms), https:// https://perma.cc/ZF7R-MHW8; Emily Holden, *What is the Green New Deal and is It Technically Possible?*, THE GUARDIAN (Dec. 29, 2018), https://perma.cc/8PAK-B6UL.

[25] GOV. ANDREW M. CUOMO, NEW YORK STATE SOCIAL, ECONOMIC, AND RACIAL JUSTICE AGENDA: 2019 STATE OF THE STATE 312–29 (2019) [hereinafter N.Y. 2019 STATE OF THE STATE], https://perma.cc/5AG6-NU8P; *Governor Cuomo Announces Green New Deal Included in 2019 Executive Budget*, N.Y. STATE (Jan. 17, 2019), https://perma.cc/BCK7-DFGX; *see also* Howie Hawkins, *The Green New Deal New York Needs, From Its Original Source*, GOTHAM GAZETTE (Jan. 14, 2019), https://perma.cc/D9ER-4DVW (criticizing Gov. Cuomo's GND for not going far enough).

[26] N.Y. 2019 STATE OF THE STATE, *supra* note 25, at 315.

[27] CLC *Carbon Dividend Plan*, *supra* note 3.

Senate introduced companion bipartisan bills to establish a cap-and-dividend strategy similar to that proposed by the CLC.[28] In contrast to the GND's broad approach to addressing climate change and social justice, the cap-and-dividend legislation focuses on GHG emissions exclusively. Rather than utilizing tax revenues to fund job creation and technology innovation, for example, the cap-and-dividend approach returns revenues collected through the program back to consumers rather than create new government programs.

This Part provides an overview of two general climate policy strategies implemented or proposed in the last decade—carbon pricing and regulatory mandates—and discusses their similarities and differences with the GND.[29] Beyond the core trait that these policies share in common—reducing GHG emissions—they aim to achieve very different outcomes. Some focus primarily on GHG emissions. Some seek to reduce energy and environmental burdens faced by underserved communities. All seek to incentivize investment in new zero-carbon generation, but some mandate specific energy technologies while others focus on emission levels rather than technologies. Most, but not all, aim to address the distributional impacts of policies that increase energy prices.[30] Part III builds upon this overview by exposing the underlying conflicts inherent in the climate policy strategies discussed here.

A. Pricing Carbon

Market mechanisms—carbon markets and carbon taxes—have dominated the domestic climate policy debate. Coupling a price on carbon with compliance flexibility allows firms with high abatement costs to continue emitting GHGs and pay the price (by purchasing cap-and-trade allowances or paying the carbon tax). Firms with lower abatement costs may reduce their emissions and thus avoid paying the carbon price (by avoiding the carbon tax or the need to purchase allowances, or by selling the allowance in a carbon market). Market-based policies are generally agnostic regarding whether individual facilities reduce emissions or pay the carbon price. As long as the emissions cap or carbon tax are set at an appropriate level, overall emissions should drop over time.

The 2009 American Clean Energy and Security Act (Waxman–Markey Bill), introduced by then-Representatives Henry Waxman and

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[28] Energy Innovation and Carbon Dividend Act of 2018, H.R. 7173, 115th Cong., 2d Sess. §§ 9902, 9512 (2018); Energy Innovation and Carbon Dividend Act of 2018, S. 3791, 115th Cong., 2d Sess. §§ 9902, 9512 (2018).

[29] This list only scratches the surface of options for reducing emissions. It does not include tax incentives or research and development funding, for example. A new book published by the Environmental Law Institute catalogues "over one thousand legal options" to reduce U.S. GHG emissions. LEGAL PATHWAYS TO DEEP DECARBONIZATION IN THE UNITED STATES, *supra* note 10, at 1.

[30] *Id.*

Edward Markey, remains the high-water mark for the federal climate policy debate. The bill, which passed the U.S. House of Representatives but did not come up for a vote in the U.S. Senate, would have established a nationwide carbon market with an emissions cap that became more stringent over time and provided funding to support multiple policy goals via allowance auction revenue.[31] The bill included specific rules for allowance allocation and auctioning, mechanisms to protect energy-intensive industries whose competitiveness could be jeopardized by higher energy prices resulting from the carbon price, offsets provisions, and a market oversight regime.[32] The Waxman–Markey Bill also included a federal renewable portfolio standard, energy efficiency incentives, and other policies to support energy innovation.[33]

Although the Waxman–Markey Bill did not become law, two state-based carbon markets are currently operating, one in Northeastern and Mid-Atlantic states and the other in California.[34] The states participating in these markets supplement the carbon price with renewable portfolio standards and other incentives to encourage deployment of clean energy technologies.[35]

The CLC and Washington State carbon dividend proposals are the latest developments in carbon pricing proposals.[36] They build upon cap-and-dividend legislation introduced in 2009 by U.S. Senators Maria Cantwell and Susan Collins. That bill called for an 83% reduction in GHG emissions between 2005 and 2050.[37] If enacted, the Cantwell–Collins bill would have established a "Carbon Revenue Trust Fund" to return 74% of the revenue to U.S. citizens.[38]

The CLC proposal calls for an initial $40 per ton carbon tax that increases over time.[39] The plan, which the CLC promotes as a "conservative climate solution," rejects creating new government programs. Instead, the CLC calls for returning revenue to all American citizens "on an equal and monthly basis."[40] The proposal also calls for a border tax adjustment to protect domestic companies that may be

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[31] American Clean Energy and Security Act of 2009 (Waxman–Markey Bill), H.R. 2454, 111th Cong. § 721 (2009).

[32] *Id.* §§ 241–43, 721–24, 731, 732.

[33] *Id.* tit. I–II.

[34] Letter from RGGI Member States, to Members of Congress (Oct. 31, 2007); CAL. ENVTL. PROT. AGENCY, AIR RES. BD., OVERVIEW OF ARB EMISSIONS TRADING PROGRAM (2015), https://perma.cc/HZJ5-BFZD.

[35] *Renewables Portfolio Standard—RPS*, CAL. ENERGY COMM'N, https://perma.cc/7PQN-A39A (last visited Jan. 25, 2020) ("The Renewables Portfolio Standard (RPS) is one of California's key programs for advancing renewable energy.").

[36] CLC *Carbon Dividend Plan*, *supra* note 3; Initiative Measure No. 1631 (Wash. 2018), https://perma.cc/A4QR-TXTK.

[37] Carbon Limits and Energy for America's Renewal (CLEAR) Act, S. 2877, 111th Cong. (2009).

[38] *Id.* § 2.

[39] JAMES A. BAKER, III ET AL., CLIMATE LEADERSHIP COUNCIL, THE CONSERVATIVE CASE FOR CARBON DIVIDENDS (2017).

[40] *Id.*

vulnerable to competition with imported goods from countries without similar carbon prices.[41] The final prong of the CLC proposal—preempting state climate policies, preventing lawsuits based on a company's contribution to climate change, and scaling back some existing environmental regulations[42]—may prove far more controversial, as it aims to trade climate policy for existing protections against harmful pollutants.

Lawmakers in the House of Representatives and Senate introduced bipartisan companion bills to establish a cap-and-dividend strategy similar to the carbon dividend approach proposed by the CLC.[43] In contrast to the GND's broad approach to addressing climate change and social justice, the cap-and-dividend legislation is an example of a narrower focus on GHG emissions specifically and represents a strategy choice to return revenues collected through to the program back to consumers rather than create new government programs.

Despite the renewed enthusiasm for taxing carbon in some Washington, D.C. circles, failed carbon tax ballot measures in Washington State in 2016 and 2018 are sobering reminders of the hurdles facing climate policy proposals.[44] The 2016 proposal would have used carbon tax revenues to reduce income taxes.[45] The 2018 measure took a different approach. Rather than using the carbon tax to offset income tax, the 2018 proposal used revenue to reduce GHG emissions through investments in clean energy, energy efficiency, and transportation.[46]

B. Clean Air Act Regulations and Clean Energy Targets

The domestic climate policy debate has been in disarray since Congress failed to enact the 2009 Waxman–Markey Bill. The Obama Administration turned to regulatory measures to address GHG emissions under the Clean Air Act (CAA), a process that abruptly ended with the election of Donald Trump.[47] Shortly after taking office, the Trump Administration initiated the process for withdrawing from the

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41 *Id.*

42 *Id.*

43 Energy Innovation and Carbon Dividend Act of 2018, H.R. 7173, 115th Cong., 2d Sess. (2018); Energy Innovation and Carbon Dividend Act of 2018, S. 3791, 115th Cong., 2d Sess. (2018).

44 *Washington Initiative 732—Create Carbon Emission Tax—Results: Rejected*, N.Y. TIMES (Aug. 1, 2017), https://perma.cc/W4Q3-HGKT; *Washington Election Results*, N.Y. TIMES (May 15, 2019), https://perma.cc/XRR8-PVMJ.

45 Initiative Measure No. 732, § 2 (Wash. 2015), https://perma.cc/NER6-D2LC.

46 Initiative Measure No. 1631, § 4 (Wash. 2018), https://perma.cc/S7A5-RGQC.

47 *Electric Utility Generating Units: Repealing the Clean Power Plan*, ENVTL. PROT. AGENCY, https://perma.cc/JDC6-SNY4 (last updated June 19, 2019); Repeal of the Clean Power Plan; Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations, 84 Fed. Reg. 32,520 (July 8, 2019) (to be codified at 40 C.F.R. pt. 60).

Paris Agreement and is undoing many of the Obama-era CAA regulations targeting GHG emissions.[48]

The Obama-era Environmental Protection Agency's (EPA) efforts culminated with the Clean Power Plan, which targeted GHG emissions from existing power plants.[49] The rule created state-specific emissions targets calculated based on three criteria: improving efficiency at existing coal-fired power plants; increasing the use of existing natural gas facilities; and increasing or maintaining generation from zero-emitting sources (including renewable and nuclear facilities).[50] The Clean Power Plan granted states wide latitude to develop their own plans to meet the targets. The rule included incentives for renewable energy and energy efficiency investments in low-income communities, as well as instructions for states to consider environmental justice impacts of their compliance plans, but the CAA limited the EPA's ability to otherwise address other policy goals.

The rule did not require states to adopt market mechanisms in their respective compliance plans, but it did identify trading as an option and outlined two trading options—one based directly on carbon dioxide emissions and one based on power plant heat-rate efficiency. The Obama administration also adopted CAA rules targeting GHG emissions from motor vehicles and other stationary sources. These rules did not include the same degree of compliance flexibility as the Clean Power Plan, nor did they aim to address distributional impacts of the policies or drive investment in specific communities.

State renewable portfolio standards (RPSs) mandate renewable energy generation.[51] These policies may support state GHG reduction goals, but the RPS requirements are generally not directly linked to GHG emission targets. Some states have opted for clean energy standards rather than renewable portfolio standards to incorporate incentives for carbon capture technologies and nuclear energy.[52] Other

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[48] *What is the Paris Climate Agreement*, UNFCC, https://perma.cc/Q4LC-XKLM (last visited Jan. 25, 2020); *see* Lisa Friedman, *Trump Administration to Begin Official Withdrawal From Paris Climate Accord*, N.Y. TIMES (Oct. 23, 2019) https://perma.cc/22S5-VH3E (discussing the Trump Administration's initiation of the formal process to remove the United States from the Paris Climate Accord); Carol Davenport, *Trump to Revoke California's Authority to Set Stricter Auto Emission Rules*, N.Y. TIMES (Sept. 20, 2019) https://perma.cc/BU59-74Z2 (discussing the Trump Administration's rollback of the Obama-era Clean Air standards, specifically the revocation of the waiver granted to California allowing the enactment of stricter standards at the state level).

[49] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule (Clean Power Plan), 80 Fed. Reg. 64,661–64,662 (Oct. 23, 2015) (codified at 40 C.F.R. pt. 60).

[50] Jeremy M. Tarr & David Hoppock, *Apples and Oranges: Assessing the Stringency of EPA's Clean Power Plan*, 44 Envtl. L. Rep. (Envtl. Law Inst.) 11,079, 11,080 (2014).

[51] *Most States Have Renewable Portfolio Standards*, U.S. ENERGY INFO. ADMIN. (Feb. 3, 2012), https://perma.cc/F27D-BYXM.

[52] *See, e.g.*, Order Adopting a Clean Energy Standard (N.Y. Clean Energy Standard), N.Y. P.S.C. Op. No. 15-E-0302, at 3, 13–14, 19–20 (2016) https://perma.cc/4F9G-MRTB.

states have revised renewable energy mandates to require significantly higher rates of renewable generation.[53]

A growing number of states with RPSs, including some that participate in state-based carbon markets, are also implementing new policy mandates and targets to reduce their respective GHG emissions. Some in the Northeast, Mid-Atlantic, and Midwest have recently implemented Zero Emission Credit programs requiring load-serving entities to compensate economically vulnerable nuclear power plants for the attribute of zero-carbon baseload electricity generation.[54] Seven states and the District of Columbia announced GHG-reduction targets in 2019, committing to carbon neutral electricity sectors between 2040 and 2050.[55] This group of states has not identified specifically how they will achieve the targets, but they will depend in part on aggressive RPSs.

C. The Green New Deal

The GND dwarfs each of the policies described in the preceding subsections in terms of scope, emission reduction ambition, and timeline. Nonetheless, the framework outlined by Representative Ocasio-Cortez and Senator Markey shares traits with many of them. Like the GND, the Waxman–Markey Bill sought to reduce emissions throughout the U.S. economy rather than focusing on a specific sector and included both environmental and social goals.[56] Both approaches would include funding to support technology innovation, help coal-dependent communities mitigate job losses, and link energy efficiency, renewable energy, and climate policies under one umbrella. The Clean Power Plan incentivized investments in low-income areas and required states to consider environmental justice concerns when developing compliance plans—again a far cry from the ambition of the GND but still an example of incorporating social justice concerns into climate mitigation measures.

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53 GALEN BARBOSE, LAWRENCE BERKELEY NAT'L LAB., U.S. RENEWABLES PORTFOLIO STANDARDS: 2019 ANNUAL STATUS UPDATE 4 (2019), https://perma.cc/SXN4-JHRB (noting that "ten states enacted higher RPS targets").

54 *See, e.g.*, N.Y. Clean Energy Standard, N.Y. P.S.C. Op. No. 15-E-0302, at 20; Illinois Power Agency Act, 20 ILL. COMP. STAT. 3855/1-75(d-5)(1) (2018); An Act Concerning Zero Carbon Solicitation and Procurement, S.B. 1501, Sess. Year 2017, June Spec. Sess., Pub. Act No. 17-3 § 1(1)(d)–(e) (Conn. 2017).

55 *See* U.S. Energy Info. Admin., *Maine and New York Become the 6th and 7th States to Adopt 100% Clean Electricity Targets*, EIA.GOV (Sept. 26, 2019) https://perma.cc/XUA3-PWEN; Executive Order B-55-18 to Achieve Carbon Neutrality (Cal. Sept. 10, 2018); *Fact Sheet: State and Utility Climate Change Targets Shift to Carbon Reductions, Technology Diversity*, CLEAN AIR TASK FORCE (May 5, 2019), https://perma.cc/3BP9-LUR7; Robert Walton, *Hawaii First State to Enact 100% Carbon Neutral Goal*, UTIL. DIVE (June 5, 2018), https://perma.cc/Q5NV-8TB3/.

56 American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. § 702 (2009).

The GND is perhaps most similar to state carbon neutrality goals. The state timelines are longer than the GND—aiming for carbon neutrality between 2040 and 2050 rather than the GND's 10-year goal—but the states and the GND set specific targets that depend upon technologies that do not currently exist.

Yet the carbon pricing and regulatory mandates discussed here are traditional environmental laws at heart. Their primary, or sole, aim is to reduce pollution. The GND is as much "new deal" as it is "green." It redefines the climate challenge as something larger than environmental policy. In doing so, the GND also challenges the traditional approaches to carbon reductions, both in terms of scope and stringency.

IV. WHAT WE TALK ABOUT WHEN WE TALK ABOUT CLIMATE POLICY

Decarbonization policy substitutes for, or significantly alters, many existing policies. Decarbonization may function as energy policy by influencing the means by which we produce and consume energy. Decarbonization may function as transportation policy by changing automobile technologies, altering transportation options, or lowering the carbon content of fuels.[57] Carbon offset markets may function as agriculture policy, providing incentives for farmers to adopt new practices or set aside land for conservation. These are explicit strategies designed to target major sources of GHG emissions.

Decarbonization may take the form of international trade policy. Many federal proposals seek to protect certain industries vulnerable to international competition from businesses not subject to a carbon price, for example.[58] The Waxman–Markey Bill included specific provisions to protect "energy intensive, trade-exposed" industries, as well as border tax adjustments.[59] The CLC carbon dividend proposal adopts the border tax adjustment approach as one of its four core elements.[60] Climate policy may also provide a platform for nations to achieve other international relations goals.[61]

Decarbonization policies also often include elements of industrial policy, as they provide incentives to develop new economic sectors and transform technologies used in other sectors.[62] The timing of emission

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[57] *Compliance Offset Program*, CAL. AIR RES. BD. (Oct. 20, 2019), https://perma.cc/7XMR-8QNS (providing links to carbon offset protocols).

[58] *See, e.g.*, CLC *Carbon Dividend Plan*, *supra* note 3, § 4.

[59] American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. § 782(e) (2009).

[60] CLC *Carbon Dividend Plan*, *supra* note 3, § 4.

[61] Matthew Ranson & Robert N. Stavins, *Post-Durban Climate Policy Architecture Based on Linkage of Cap-and-Trade Systems*, 13 CHI. J. INT'L L. 403, 426 (2013); Robert O. Keohane & David G. Victor, The Regime Complex for Climate Change 18 (Harvard Project on Int'l Climate Agreements, Discussion Paper 10-33, 2010).

[62] *See, e.g.*, BAKER ET AL., *supra* note 39, at 4 ("Exports by companies in sectors with greater than 5% energy cost in final value should have any carbon taxes rebated on leaving the United States. Finally, non-emissive fossil fuel products (e.g. asphalt for road

reduction requirements may also have direct industrial policy implications. A rapid transition would likely have a much greater cost, lock in use of existing technologies, cause rapid job losses in some sectors and create jobs in other sectors.

This Part focuses on three cross-cutting categories that are often not treated as core goals of decarbonization, but where disagreement may pose barriers to reaching consensus on climate policy proposals: technology policy, social justice policy, and fiscal policy.

A. Decarbonization as Technology Policy

The technology policy debate breaks down along two fault lines: 1) whether climate policy should promote renewable energy or "clean" energy and 2) how to incentivize investments in innovative technologies. The "renewables versus clean" distinction turns on whether a low carbon future should include nuclear energy or fossil fuel-fired generation with carbon capture.[63] A growing number of states are implementing renewable or clean energy mandates. This is already a major factor in GND discussions and could sway some stakeholders' opinions about the wisdom of the GND approach generally.[64] States are also taking different approaches to the question, with some implementing aggressive new renewable energy mandates and others adopting clean energy mandates.[65]

A key trait of carbon taxes and carbon markets is compliance flexibility. The focus is on emissions, not the technologies that are deployed. These approaches are agnostic regarding the "renewables versus clean" argument. Even though carbon pricing schemes do not mandate renewable energy, they create favorable economic conditions for lower carbon forms of energy. They may operate in parallel with technology incentives or mandates. For example, the Waxman–Markey Bill combined a carbon market, a national renewable portfolio standard, and technology funding in a single legislative package.[66] Although New York is part of the RGGI carbon market, the state also utilizes a Zero

use) should be exempt, with a refund for any tax previously paid."); Jonas Meckling et al., *Winning Coalitions for Climate Policy*, 349 SCI. 1170, 1171 (2015) (discussing incentives for green industrial policy).

63 *See, e.g.*, Joshua S. Goldstein & Staffan A. Qvist, *Only Nuclear Energy Can Save the Planet*, WALL ST. J. (Jan. 25, 2020), https://perma.cc/C2UK-C4R3; Jesse Jenkins & Samuel Thernstrom, *We Need More Than Solar and Wind to Power the Green New Deal*, N.Y. TIMES (Jan. 17, 2019), https://perma.cc/WEY6-757J.

64 Dino Granini, *The Energy 202, The Green New Deal Is Already Sparking Debate over Nuclear Energy*, WASH. POST (Feb. 11, 2019), https://perma.cc/FXW2-A8YR.

65 *See, e.g.*, Iulia Gheorgiu, *As 100% Renewables Mandate Nears, Puerto Rico Sees New Microgrid Initiative, Resilience Focus*, UTIL. DRIVE (Mar. 22, 2019), https://perma.cc/5QZQ-TMJK; Press Release, Andrew M. Cuomo, Governor, N.Y., Governor Cuomo Announces Establishment of Clean Energy Standard that Mandates 50 Percent Renewables by 2030 (Aug. 1, 2016), https://perma.cc/EV7Y-QQRM.

66 American Clean Energy and Security Act of 2009 (Waxman–Markey Bill), H.R. 2454, 111th Cong. tit. I, III (2009).

Emission Credit program to help keep existing nuclear plants economically-viable in the state's electricity market.[67] Similarly, New York and California recently announced ambitious new renewable energy requirements for the electricity grid operators in their respective states.[68] These requirements operate in parallel with the RGGI and California carbon markets.

Renewable energy mandates and some GND proposals treat the makeup of the energy generation mix as a central feature of decarbonization policy rather than as a means by which to achieve the goal of decarbonization. As noted above, the initial GND framework called for "meeting 100% of national power demand through renewable sources."[69] The language in the Ocasio-Cortez-Markey resolution is more ambiguous. The resolution does not discuss nuclear power, instead calling for "meeting 100 percent of [U.S. energy needs] through clean, renewable, and zero-emission energy sources."[70] The resolution's language leaves the door open to nuclear and other non-renewable low carbon technology options, but the issue is, thus far, not resolved among proponents of the GND.[71]

There is more common ground regarding technology innovation, as it is an important part of any serious climate policy strategy.[72] Furthermore, a constraint on emissions may induce firms to invest in new technologies to reduce costs.[73] The line between technology mandates versus incentives and flexibility is thus less stark than the renewables versus clean debate discussed above. Nonetheless, there are important differences of opinion regarding the appropriate strategies to promote innovation.

The CLC Carbon Dividend Plan relies solely on the carbon price to incentivize investments in low carbon technologies.[74] Including predictable increases in the carbon tax policy allows businesses subject to the tax to make long-term investments to reduce emissions, and thus

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67 N.Y. Clean Energy Standard, N.Y. P.S.C. Or. No. 15-E-0302, at 3, 13–14 (2016).

68 N.Y. 2019 STATE OF THE STATE, *supra* note 25, at 313–15. California now requires fifty-percent renewable energy by 2030. Clean Energy and Pollution Reduction Act of 2015, S.B. 350, ch. 547 (Ca. 2015).

69 DRAFT TEXT FOR PROPOSED ADDENDUM TO HOUSE RULES FOR 116TH CONGRESS OF THE UNITED STATES, *supra* note 14, § 6(A)(i).

70 Ocasio-Cortez–Markey GND Resolution, *supra* note 18, at 7.

71 *See, e.g.*, Jeff Brady, Transcript, *Despite Few Details and Much Doubt, The Green New Deal Generates Enthusiasm*, NAT'L PUB. RADIO (Feb. 8, 2019), https://perma.cc/6RBM-U38P ("Green New Deal backers say they also want to eventually phase out nuclear energy.").

72 Joseph P. Tomain, *"Our Generation's Sputnik Moment": Regulating Energy Innovation*, 31 UTAH ENVTL. L. REV. 389, 392–93 (2011).

73 David Popp, *Pollution Control Innovations and the Clean Air Act of 1990*, 22 J. POL'Y ANALYSIS & MGMT. 641, 644 (2003).

74 BAKER ET AL., *supra* note 39, at 1–2 (claiming that a $40 per ton carbon tax would "send a powerful market signal that encourages technological innovation and largescale substitution of existing energy and transportation infrastructures, thereby stimulating new investment").

reduce compliance costs. This, in turn, incentivizes investments in new energy technologies, as well as efficiency improvements. Returning all revenue to citizens rather than using at least a portion of the carbon tax payments to fund technology research, financial incentives, subsidies, or direct purchases may leave critical gaps in the technology development pipeline unless sufficient funding for research, development, and deployment are available through other government programs.[75]

B. Decarbonization as Social Justice Policy

A core premise of the GND is that addressing climate change requires addressing broader socioeconomic challenges. The U.S. electricity sector is already moving away from coal in favor of natural gas and renewable energy, resulting in public health and environmental benefits, but also causing job losses in coal-dependent communities.[76] Accelerating a move to clean energy will increase job losses unless federal and state policymakers address the problem. The GND calls for "achiev[ing] net-zero greenhouse gas emissions through a fair and just transition for all communities and workers,"[77] seeking to correct past social and environmental burdens and avoid creating new burdens in the process.[78] This approach includes, but is not limited to, environmental policy concerns.[79]

No other policies included in this Essay go as far as the GND to address social justice concerns, but each of them considers at least the direct economic impacts of the new policy, and some go well beyond the direct economic impacts to address other social impacts. The social justice provisions in some of the programs included in this section—particularly the Clean Power Plan—are limited because the authorizing statute focuses on pollution control but does not authorize the agency to directly address justice concerns. Others, such as RGGI, are limited because they focus on one sector. The recent carbon tax, cap-and-dividend, and GND proposals are not constrained by preexisting policy constraints. Instead, they demonstrate the continuing disagreements regarding the meaning of social justice, the role of climate policy in addressing the justice needs, and the proper balance between social justice concerns and other climate policy goals.

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75 Current examples of technology innovation policies that support GHG emission-reduction goals include the Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E), renewable energy tax credits, and numerous funding opportunities for technology research and development. *See, e.g.*, ARPA-E.GOV, https://perma.cc/AKS9-H7B9 (last visited Jan. 25, 2020); *2017 Renewable Energy Tax Credits*, ENERGY STAR, https://perma.cc/UP5J-UCDB (last visited Jan. 25, 2020).

76 *See* BLUMENTHAL, *supra* note 7, at 3–7.

77 Ocasio-Cortez–Markey GND Resolution, *supra* note 18, at 5.

78 Darren McCauley & Raphael Heffron, *Just Transition: Integrating Climate, Energy and Environmental Justice*, ENERGY POL'Y, Aug. 2018, at 1.

79 Alice Kaswan, *Expanding Environmental Justice to Achieve a Just Transition*, REGULATORY REVIEW (Sept. 26, 2018), https://perma.cc/2WS2-AP5J.

As noted previously, the Waxman–Markey Bill included numerous provisions to address the impacts of higher energy prices on low income citizens, the geographic disparities in the energy mix, and the inevitable job losses that would result from a move to a lower carbon economy.[80] Some stakeholders criticized the Waxman–Markey approach due to its reliance on emissions trading.[81] The bill sought to steer the U.S. economy to a low carbon future, but it did not include specific provisions to ensure that the energy transition reduced pollution in burdened communities. Large emitters of GHGs would have to reduce emissions or purchase allowances, but carbon markets leave those decisions to the individual operators.

If the federal climate debate was not sufficiently responsive to environmental justice critiques, the arguments have had much more resonance in California. The statute authorizing California's Cap-and-Trade Program included both substantive and procedural requirements to address environmental justice concerns about pollution hot spots and ensuring that the program delivers economic benefits to disadvantaged communities. [82]

The CAA limited the EPA's options for incorporating social justice considerations in the 2015 Clean Power Plan, for example. There was ongoing debate, and unresolved lawsuits, challenging what options were allowed under the CAA.[83] It was clear, however, that the current CAA does not authorize EPA to collect revenue from a GHG emissions trading program and use the funds to target social justice goals. Instead, the EPA required states to engage vulnerable communities during the rule development process.[84] The Clean Power Plan also included an optional Clean Energy Incentive Program that, *inter alia*, encouraged energy efficiency investments in low-income communities to distribute the rule's benefits.[85] The EPA was criticized by some environmental

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[80] American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. § 264 (2009).

[81] Bryan Walsh, *What the Energy Bill Really Means for Co2 Emissions*, TIME (June 27, 2009), https://perma.cc/5PW9-CWR6.

[82] Alice Kaswan, *A Broader Vision for Climate Policy: Lessons from California*, 9 SAN DIEGO J. CLIMATE & ENERGY L. 83, 88–92 (2018).

[83] LINDA TSANG & ALEXANDRA M. WYATT, CONG. RESEARCH SERV., R44480, CLEAN POWER PLAN: LEGAL BACKGROUND AND PENDING LITIGATION IN WEST VIRGINIA V. EPA (Mar. 8, 2017).

[84] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662, 64,670 (Oct. 23, 2015) (to be codified at 40 C.F.R pt. 60). (requiring states to "include in their initial submittals a description of how they engaged with vulnerable communities as they developed their initial submittals, as well as the means by which they intend to involve communities and other stakeholders as they develop their final plans") (hereinafter CPP Final Rule); Executive Order 12,898 instructs federal agencies to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." Exec. Order No. 12898, 3 C.F.R. 859 (1994).

[85] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. at 64,829.

justice advocates for allowing emissions trading as a compliance option.[86]

Carbon tax proposals focus primarily on mitigating GHG emissions and, to varying degrees, mitigating the economic impacts of the policies on vulnerable citizens or business sectors.

For example, the CLC Carbon Dividend Plan does not address social justice directly, but the proposal notes that a greater portion of dividend payments would flow to lower income households, thus redistributing carbon tax revenue and potentially helping those families cope with higher energy costs.[87] The 2018 Washington State carbon fee ballot initiative dedicated five percent of the fee revenue "to prepare communities for the impacts of climate change and to help certain populations who are particularly affected by climate change."[88]

The RGGI carbon market similarly does not address the burdens placed on communities near power plants, nor does it provide direct funding to address social issues. The states participating in the RGGI market do direct a large portion of their respective share of the auction revenue to support energy efficiency improvements to reduce energy bills, however.[89] These different policy approaches highlight two lessons for decarbonization and social justice. First, and most obviously, there is no consensus about incorporating social goals into decarbonization strategies to begin with. Some policies address direct economic impacts of higher energy prices or job losses. Others take a much broader approach.

Second, and perhaps more fundamentally, there is not agreement about the scope of social goals among stakeholders that support incorporating justice concerns in climate policy. Environmental justice advocates remain some of the strongest critics of market mechanisms, which may put them at odds with consumer protection advocates seeking to minimize the cost of reducing GHG emissions.[90] Climate policy may create distributional impacts, placing higher costs and burdens on certain communities or regions of the country.[91] Other stakeholders and scholars argue for focusing on energy justice or climate

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86 *See, e.g.*, Emily Holden, *Inside the Uphill Battle Against Carbon Trading*, E&E NEWS (Feb. 18, 2016), https://perma.cc/F5HC-EZ2V.

87 SCHULTZ & HALSTEAD, *supra* note 9, at 3.

88 *Initiative Measure No. 1631*, VOTERS' GUIDE 2018 GEN. ELECTION, https://perma.cc/PXV7-87P3 (last visited Jan. 25, 2020).

89 REG'L GREENHOUSE GAS INITIATIVE, THE INVESTMENTS OF RGGI PROCEEDS IN 2016, at 3 (2018) ("Energy efficiency makes up 55 percent of 2016 RGGI investments and 58 percent of cumulative investments. Programs funded by these investments in 2016 are expected to return $822.8 million in lifetime energy bill savings to over 176,000 participating households and 2,430 businesses in the region.").

90 Jonas J. Monast et al., *On Morals, Markets, and Climate Change: Exploring Pope Francis' Challenge*, 80 L. & CONTEMPORARY PROBLEMS 135, 147–52 (2017).

91 *See, e.g.*, Amy Sinden, *Allocating the Costs of the Climate Crisis: Efficiency Versus Justice*, 85 WASH. L. REV. 293, 304 (2010) (discussing the distributional impacts of carbon markets and carbon taxes).

justice, in addition to other social concerns.[92] This is not to suggest that each of these framings of social and environmental justice are necessarily at odds with one another, but it is important to recognize that general agreement about the need to address the social impacts of climate and energy policy does not lead to a single outcome.

C. Decarbonization as Fiscal Policy

A third source of conflict among the policies discussed in this Essay is whether climate policy instruments should generate government revenue and, if so, whether it should fund climate-related government programs or enter the general government coffers. For example, the Congressional Budget Office estimated that the Waxman–Markey Bill would have "[i]ncrease[d] federal revenues by about $846 billion[] and [i]ncrease[d] direct spending by about $821 billion," resulting in an estimated $24 billion surplus between 2009 and 2019.[93] The bill allocated the auction revenue to, *inter alia*, help low- and moderate-income households with energy costs, prevent international deforestation, fund domestic and international adaptation efforts, support research and development of new technologies, and help U.S. workers transition away from fossil fuel-dependent industries.[94] Opponents criticized the bill as simply creating a new big government program rather than staying tightly focused on mitigating climate change.[95]

The RGGI carbon market generates auction revenue for the participating states.[96] The states generally use the revenue to support energy efficiency, renewable energy, and low-income assistance programs, but that is not required in order to participate in the RGGI program.[97]

The debate also plays out among carbon tax proponents. Some argue that a carbon tax should replace a federal payroll tax or be used to supplement federal taxes to fill budget gaps and control the deficit.[98]

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92 Kirsten Jenkins, *Setting Energy Justice Apart from the Crowd: Lessons from Environmental and Climate Justice*, 39 ENERGY RES. & SOC. SCI. 117, 118 (2018); *Environmental & Climate Justice*, NAACP, https://perma.cc/ZAE7-W5LL (last visited Jan. 25, 2020) (distinguishing between "climate justice" and "environmental justice," and providing examples of the interaction between the two concepts); Maxine Burkett, *Just Solutions to Climate Change: A Climate Justice Proposal for A Domestic Clean Development Mechanism*, 56 BUFFALO L. REV. 169, 188–92 (2008).

93 Waxman–Markey Bill, *supra* note 31, at 359.

94 *Id.* at 89.

95 *See, e.g.*, Rich Lowry, *The Waxman-Markey Travesty*, NAT'L. REV. (June 30, 2009), https://perma.cc/R37P-KPU7 (accusing the architects of the Waxman–Markey Bill of using auction revenue to "[buy] off every possible interest group").

96 *Elements of RGGI*, RGGI (2019), https://perma.cc/FET9-GS3S.

97 *Id.*

98 JERRY TAYLOR, NISKANEN CTR., THE CONSERVATIVE CASE FOR A CARBON TAX (Mar. 23, 2015), https://perma.cc/72E3-9HXY; *Gore Says Tax Pollution, Not Payrolls*, ENVTL. NEWS NETWORK (Sept. 19, 2006), https://perma.cc/FLP5-U7GB.

Republican Representative Carlos Curbelo introduced a carbon tax bill in 2015 that would use the revenue to replace the federal excise tax on gasoline and diesel.[99] As noted above, the revenue neutral carbon dividend approach would return carbon tax revenue to citizens rather than creating government revenue.

The GND does not identify funding strategies for the expansive new government programs.[100] Promoting technology, helping low income communities cope with higher energy prices, providing job guarantees, and moving the country rapidly to a low-carbon future will require major public and private sector investments. Climate mitigation policies do not have to create the revenue necessary to implement the policies. Indeed, many government programs rely on general tax dollars rather than generate funds themselves. Representative Ocasio-Cortez suggested that a new wealth tax could fund GND policies.[101]

Disputes over the fiscal aspects of a climate policy may be more impactful than the disputes over technology policies or social justice policies. There could be compromises on technology and social justice. In contrast, funding new climate and social policies through general tax revenues, or funding them with government revenues at all, may prove to be a dealbreaker for advocates of revenue-neutral policies. Other stakeholders may reject climate policy options that do not include funding to support technology research and development or address the social and economic impacts of the policy.

V. CONCLUSION

The GND does not resolve the conflicts identified in this Essay. Yet, the framework has already made an important contribution by changing the narrative about climate policy in 2019.[102] Rather than dismissing climate change as a national problem, many policymakers and stakeholders responded to the GND proposal by debating questions such as whether ten years is too quick to transform the energy sector or whether nuclear energy has a role in a low carbon future.[103] The Ocasio-Cortez–Markey Resolution earned 98 cosponsors in the House of Representatives and, as noted above, many Democratic presidential

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99 Noah Kaufman et al., Emission, Energy, and Economic Implications of the Curbelo Carbon Tax Proposal (Columbia SIPA, Ctr. on Glob. Pol'y Working Paper, 2018), https://perma.cc/V8DZ-SUSV.

100 Republican opponents of the GND cite a cost of $93 trillion, even though the number has no basis and the GND remains a concept rather than a specific proposal. Zack Colman, *The Bogus Number at the Center of the GOP's Green New Deal Attacks*, POLITICO (Mar. 10, 2019), https://perma.cc/B9HY-ASRF.

101 Tom DiChristopher, *Alexandria Ocasio-Cortez Floats 70% Tax on Wealthy to Pay for 'Green New Deal*, CNBC (Jan. 4, 2019), https://perma.cc/TQ3K-ZX9P.

102 Grandoni, *supra* note 11.

103 *See, e.g.*, John Cassidy, *The Good News about a Green New Deal*, NEW YORKER (Mar. 4, 2019), https://perma.cc/4YGX-YVLL.

candidates endorsed the GND concept.[104] Mitigating climate change will require much more than a non-binding resolution, white papers, and editorials, but the GND may prove to be a critical step in creating a policy window to address the policy conflicts that have frustrated adoption of federal climate legislation.

Starting with a broad vision about social justice and environmental policy, rather than focusing on political viability at the outset, has helped the GND earn the attention of the media and stakeholders. It reframes climate change as a critical social challenge rather than simply an environmental problem. Expanding the policy goals GHG reductions could allow engaging different constituencies with different arguments. Stakeholders could see tangible benefits in terms of jobs, reduced burdens from local pollution (due to retiring fossil fuel-fired power plants), and greater opportunities for directing the future of their respective communities (via the just transition emphasis).

An important question for GND proponents is whether they will insist on achieving all of the goals at one time. The strategic choice to present the GND as a package of general ideas rather than specific policy proposals creates the opportunity to find consensus among supporters of climate policy. The original New Deal did not come about via one statute and it is likely that any elements of the GND that become law would do so through different statutes, as well.

GND proponents may be able to find common ground on some provisions while agreeing to hold other issues for later debates. For example, carbon pricing can play a role in a broader social and environmental policy framework or it can be deployed in a narrower manner focusing on a particular sector or in a policy approach that focuses solely, or primarily, at carbon pollution. A conservative think tank argues for incorporating a carbon tax into the GND,[105] and a former Obama Administration official argues that a carbon tax approach is "the original GND."[106] The proponents of the CLC Carbon Dividend Plan or the GND may still engage in discussions about the merits of carbon pricing and potentially reach agreement on at least one aspect of a comprehensive climate mitigation strategy. Other coalitions could emerge to pursue other social justice and environmental goals.

There is also an inherent tension between the rapid decarbonization called for in the GND, inclusive community participation, environmental protection, and procedural and corrective justice goals.[107] How willing would GND proponents be to compromise

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104 Ocasio-Cortez–Markey GND Resolution, *supra* note 18.

105 Ed Dolan, *A Carbon Tax Should Be the Centerpiece of the GND*, NISKANEN CTR. (Feb. 5, 2019), https://perma.cc/55LE-FXUC.

106 Steven Rattner, Opinion, *Yes, We Need a Green New Deal. Just Not the One Alexandria Ocasio-Cortez is Offering*, N.Y. TIMES (Mar. 20, 2019), https://perma.cc/7SPG-DJAT.

107 J.B. Ruhl, *What Happens When the Green New Deal Meets the Old Green Laws?*, AM. COLL. OF ENVTL. LAWYERS (Mar. 27, 2019), https://perma.cc/FTY3-ATSS.

on procedural protections such as streamlining NEPA, the purpose of which is to examine environmental impacts in detail before acting, which is the opposite of moving quickly? Involving local communities in decisions that will affect their futures is important, but it is also time-consuming. If urgent action is the priority, that tension must be addressed.

But the hard questions are not reserved only for GND proponents. Climate policies, including a revenue neutral carbon tax, aim to speed the transition to clean energy technologies. People are already losing jobs throughout the coal value chain—coal mines, coal-fired power plants, and rail.[108] If alternatives to the GND do not recognize that the energy transition is an economic transition, they will likely continue to struggle with building the types of coalitions necessary to adopt new legislation. Furthermore, if they do manage to achieve new legislation, relying on a carbon price may be insufficient to support the type of research and development necessary to achieve breakthrough energy technologies.

These disagreements do not alter the fundamental facts about climate change. Global GHG emissions continue to rise, and a steady stream of academic studies point to alarming impacts of unabated emission increases.[109] The failure to address climate change will undoubtedly create profound social impacts. While stakeholders may support different end goals, the emergence of the GND and new carbon pricing proposals are a refreshing change from the stalemate of the past decade and could create opportunities to resolve the disputes that have created barriers to an effective national climate policy.

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[108] BLUMENTHAL, *supra* note 7.

[109] IPCC SPECIAL REPORT ON GLOBAL WARMING OF 1.5°C (Valerie Masson-Delmotte et al. eds., 2018).