

## THE MISSED “GREEN NEW DEAL” OPPORTUNITY: CLIMATE SPENDING IN COVID-19 STIMULUS AMONG TOP EMITTERS

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### Abstract

*Many countries have developed economic relief policies in response to the economic fallout from the COVID-19 pandemic. These massive stimulus bills offer a significant opportunity for climate-related spending to stimulate economies and facilitate decarbonization. And yet, the four top emitters – China, the United States, India, and the European Union – made very few new investments, or heightened prioritization of climate spending, in their COVID-19 economic relief packages. Where new investment has occurred, it has been limited to countries and places that have already made significant financial commitments to climate spending. After outlining climate spending in COVID-19 stimulus among top emitters, I argue that this lack of prioritization can be explained by the distributive conflict model of climate change. Next, I emphasize that the absence of significant new climate change spending amounts to a missed opportunity for Green New Deal spending or spending that aims to decouple economic growth from increased carbon emissions.*

### Introduction

Nearly all parts of our lives and the global economy, including the climate, have felt the effects of the COVID-19 pandemic. Indeed, the initial COVID-19 outbreak in 2020 led to the single largest drop in emissions ever recorded due to reduced travel and slowed global trade (Liu et al., 2020). In response to the economic fallout from COVID-19 related disruption, many countries have developed economic relief policies. These massive stimulus bills offer a significant opportunity for climate-related spending, such as investments in renewable energy or to improve energy efficiency. Such spending would stimulate economies while jump-starting the transition to clean energy and decarbonization.

However, different countries have had varied approaches to climate spending in COVID-related stimulus packages. Generally, despite this massive opportunity and influx in government spending, much of the investment is likely to increase emissions long-term. Further, the most significant investments in climate change have been limited to the countries that have already made considerable climate expenditures. While some countries have been responsive to a growing climate-concerned left, the lack of climate spending in COVID-related stimulus highlights the continued entrenchment of fossil fuel interests in many countries. In other words, even after a pandemic that changed the lives of much of the world and disrupted the global economy, climate action looks much like it did before the pandemic.

This article considers the COVID-19 stimulus programs of China, India, the United States, and the European Union (EU), which together make up roughly 61% of world emissions and have each spent billions to trillions in COVID-related stimulus spending (Environmental Protection Agency, 2021). Vivid Economics, a business and policy consultancy firm, is one of the few research organizations that has attempted to document and characterize climate-relevant recovery spending across the G20 countries. In doing so, they developed a “Greenness of Stimulus Index” score to compare “green” (emissions-reducing) and “brown” (emissions-raising) spending across countries on a scale from -100 to 100 (Vivid Economics, 2021). Despite the three countries and the EU members all signing the 2015 Paris Agreement target of limiting the rise in global temperatures above pre-industrial levels to below 2 degrees Celsius (and preferably below 1.5 degrees Celsius), the economic recovery packages of China, India, and the United States all rate as net “brown,” and the EU’s stimulus is one of only a few globally that rate net “green” (Vivid Economics, 2021). The differences in climate spending in the stimulus packages can be explained by the distributive conflict model of climate change that argues that domestic politics play the most significant role in determining climate action.

As the world inches closer to missing the Paris Agreement target, economic relief packages were a significant opportunity for Green New Deal-like stimulus spending. My use of the term Green New Deal refers not to the specific resolution introduced by Representative Alexandria Ocasio-Cortez that has generated much debate, and controversy, in U.S. politics. Instead, I refer to the academic definition of the Green New Deal

discussed by Pollin (2019) and others that conceptualize the Green New Deal as large-scale investments in renewable energy and energy efficiency for the purpose of absolute decoupling of economic growth from emissions to allow for continued economic development without the “price” of increasing emissions (Pollin 2019). The economic relief packages following the COVID-19 pandemic amount to a missed opportunity for Green New Deal spending to combat climate change while decoupling economic growth from increased emissions.

## **China**

Academics hoped that China might invest in low-carbon stimulus following COVID-19 (Gosens & Jotzo, 2015). Unfortunately, most of the investments made by China were in high-emissions projects. Analysis of China’s 2020 Government Work Report, the executive government’s annual economic and social review, revealed that the overall recovery measures were on the whole more climate-friendly than the recovery measures following the 2008 global recession that focused on high-emissions projects (Gosens & Jotzo, 2015). However, China continued to invest heavily in fossil fuel industries while making only a few investments in renewable energy (Gosens & Jotzo, 2015). While China has made strides in reducing the growth of emissions over the past several years, investment in high-carbon long-term energy infrastructure continues. Of the countries discussed here, China rates the lowest on Vivid Economics’ Greenness of Stimulus index by a wide margin at approximately -50 (Vivid Economics, 2021). China accounts for roughly half of the world’s coal consumption, and as of August 2020, the total coal-fired capacity under construction totaled 98 GW, roughly the entire current coal-fired capacity of Japan and Germany combined (Gosens & Jotzo, 2015).

While China’s 14th Five Year Plan, covering the years 2021 to 2025, aims for the country to reach peak carbon emissions by 2030, it is unclear if the plan will do enough to allow China to reach its long-term decarbonization goals (Carbon Brief, 2021). In fact, COVID-19 economic stimulus spending nearly contributed to China missing its Copenhagen Accord carbon-intensity pledges in 2020, and China’s long-term Paris Agreement goals are in jeopardy (Grant et al., 2021). Similarly, Climate Action Tracker found that China’s October 2021 updated Nationally Determined Contributions (NDC) target, while attainable, is not sufficient to stay under the Paris Agreement’s 1.5 degrees Celsius climate target (Climate Action Tracker, 2021). Clearly, China prioritized economic stimulus and growth over climate goals and international agreements in their recovery spending.

It is difficult to evaluate the effects of industries and interest groups on Chinese policy, but it is clear some industries have political sway. An analysis of how Chinese provinces spent COVID-19 relief funds found that green projects were concentrated in a few jurisdictions (namely Tianjin, Shanghai, and Guizhou). Meanwhile, provinces reliant on coal mining and production, like Shanxi and Inner Mongolia, invested little in green projects (Rick, 2021). This could suggest that provinces with coal interests may have used their leverage in obstructing government investment in green projects.

However, there are signs that China recognizes the need for decarbonization. China has recently committed to stop building coal projects abroad, which it had been doing for several years under their Belt and Road Initiative (BRI), among financing other carbon-intensive infrastructure projects (Saha, 2020). However, no changes in China’s reliance on coal to meet its own energy needs were announced at the time (Brant, 2021). In recovering from the pandemic, China prioritized economic recovery and growth over climate goals. Much of China’s recovery plans focused on large projects, very few of which were green infrastructure. In terms of China’s domestic politics, this is no surprise – China’s sole ruling party, the Chinese Communist Party (CCP), measures much of its success in terms of economic growth, which the CCP views as vital to both preserving the government’s legitimacy and projecting Chinese power abroad (Harris, 2021).

## **The United States**

Early COVID-related stimulus spending in the United States was focused on economic recovery and not the climate. More recent recovery measures seek to change that fact, but much of President Joe Biden’s climate agenda hangs in the balance. The United States’ first round of coronavirus stimulus under the Biden administration, the America Rescue Plan (ARP), was signed into law in March 2021. The legislation contained only indirect climate spending, mostly in the form of assistance for mass transit (Curtis, 2021).

The next stimulus package, the Infrastructure Investment and Jobs Act (IIJA), passed in November 2021, is a \$1.2 trillion traditional infrastructure package that may further encourage fossil-fuel emitting travel. Climate-relevant parts of the law included: \$3.5 billion for carbon capture storage development, \$8 billion for zero-carbon hydrogen research, up to \$7.5 billion in grants for electric vehicles (EV) charging stations, \$30 billion for rail projects, and \$6 billion to support battery development (Meyer, 2021). In all, the IIJA amounts to only marginal spending on climate change, with the possibility of actually increasing emissions long term because of its investment in emissions-encouraging transportation infrastructure such as new roads and wider highways.

The rest of the Biden administration’s potential green investment is still to be determined. President Biden’s social spending and climate change bill, known as the “Build Back Better” framework (BBB), started as a proposed \$3.5 trillion package featuring significant spending on climate change action and social spending programs to facilitate a green economic recovery post-COVID-19. Over the last half of 2021, the BBB framework had been reduced in size to roughly \$1.7 trillion and has for now been taken off the legislative agenda altogether, mostly at the hands of Senator Joe Manchin of West Virginia (Cochrane & Edmondson, 2021). It is uncertain if the bill, or aspects of it, will pass Congress and in what form (Becker, 2021). Should the current version of the climate change provisions eventually become law, they will account for between \$500 and \$600 billion as a package of clean energy tax incentives, clean energy research, and environmental justice provisions (Sobczyk, 2021).

While Biden’s plans mark a stark shift from the “ostrich with its head in the sand approach” and the climate change denial and environmental deregulation of the Trump administration, the United States has still struggled to find political support for climate change spending in COVID-19 relief packages (Eisenstadt & MacAvoy, 2022). The Biden administration has taken several executive and regulatory actions on climate, but the United States has still made only limited investments in climate since the start of the pandemic (White House, 2021). Much of the proposed climate spending hangs in the balance, with coal-state Senator Manchin as the deciding vote – perhaps the greatest example of the continued power of fossil fuel special interests in the United States even in the midst of the COVID-19 pandemic (Cochrane & Edmondson, 2021).

Like China, the United States generally measures policy success in terms of economic measures (Harris, 2021). While the Vivid Economics Greenness of Stimulus Index rates the United States ahead of China at roughly -10, like China, much of the existing stimulus was formulated with solely economic motivations (Vivid Economics, 2021). The BBB framework hopes to change this by making significant investments in not just climate spending but health and welfare, all while stimulating the economy. How the political conflict over BBB plays out over the next several weeks to months will play a significant role in determining the overall extent of U.S. commitment to climate spending.

## India

COVID-19 recovery spending in India has developed into a mixed bag for decarbonization. India has made significant investments in both renewable and fossil fuel energy with an emphasis on increasing energy supply to meet its growing demands, regardless of the energy source. India’s stimulus contains more than \$120 billion USD for the energy sector, with renewable energy receiving almost twice as much funding as fossil fuel energy (Garg et al., 2021). However, policies supporting energy transmission and distribution likely promote fossil fuels on the whole (Garg et al., 2021).

Listing the actions that India’s government took as part of the economic recovery reveals a pattern of support for *both* decarbonization and emitting industries. For example, between 2020 and 2021, India’s government granted a loan for \$1.15 billion USD for a coal generation project in Bihar and funded a \$26.5 billion program in a biogas program to provide cleaner and cheaper fuels (Vivid Economics, 2021). Over the same time period, India’s government also spent \$780 million on afforestation projects and made \$1.5 billion investments into hydropower (Vivid Economics, 2021). In other words, India has prioritized any investments, whether it be renewables, natural gas, or coal, that it thinks will help meet the growing energy needs of its large population while expanding economic opportunities. However, at the same time India prepares to expand the growth of renewable energy, it is still unclear how India will continue to meet energy demands as India’s economy expands into energy-intensive sectors (Shih & Dennis, 2021).

Coal remains an important part of India's economy in many areas and an important source of jobs and income. Coal India Limited (CIL), which provides nearly all of India's coal mining and power, is owned mostly by the central government and provides an important source of income for coal-producing states that are among India's poorest (Gross, 2019). However, CIL's position has been weakened as it has struggled to meet growing demand, coal power's contribution to substantial pollution problems, and the increasing costs to keep outdated coal power plants usable (Shondhardt, 2021).

On the other hand, India still joined China and several other countries in changing the final text of the 2021 UN Climate Change Conference (COP 26) agreement from "phase out" to "phase down" coal. At the same time, also at COP 26, Prime Minister Narendra Modi committed India to being net-zero by 2070 – again highlighting the sometimes-contradictory nature of India's approach to climate in its economic recovery (Shondhardt, 2021). In doing so, India has acknowledged the coal industry's power and has recognized its importance in meeting energy needs in its COVID-19 relief package. At the same time, India has used the opportunity to expand its renewable energy capacity. The fact that India has not gone all-in on coal could be partially due to the weakening of coal interests over the past few years and the struggle of coal to stay cost-competitive with increasing demand.

In all, India has sought to balance renewable energy investment with growing fossil fuel energy sources to meet their growing electricity needs. The end result is a true "all-of-the-above" energy approach that, while growing the amount of renewable energy and investing in less carbon-intensive energy sources, focuses more on expanding affordable energy capacity than reducing emissions. India's approach to climate change stimulus is similar to China's in its economy and development focus, but India's government has proven more willing to invest in renewable technologies to meet energy needs. The significant investment into renewable energy is what drives India's Vivid Economics Greenness of Stimulus Index of about -18, which puts it among the middle of the pack among G20 countries, just behind the United States and well ahead of China (Vivid Economics, 2021).

### **The European Union**

Unlike China, the United States, and India, the EU has made significant commitments to climate spending in their economic stimulus packages. The EU agreed to a massive green stimulus package in July 2020, with almost a third of the funds from the stimulus package and the 2021-2027 budget, roughly 2.0 trillion euros, going to combat climate change (Clean Energy Wire, 2021). The stimulus package, called NextGenerationEU (NGEU), along with the EU's long-term budget, is the largest stimulus package ever financed in Europe. It seeks to support green projects through hundreds of billions of Euros worth of grants and loans among member countries (Gronewold, 2021).

The NGEU is also being presented as a climate policy. European Commission President Ursula von der Leyen noted that she views NextGenerationEU as a vehicle to steer Europe towards carbon neutrality by 2050 (Gronewold, 2021). In other words, unlike in the stimulus packages of the three countries described previously, which are relief plans containing climate measures, NGEU is being billed as a broad, long-term policy that seeks to both contribute to the economic recovery while combating climate change. The EU as a whole managed to put record sums of money towards climate action and made it a focus for years to come, driving a Vivid Economics Greenness of Stimulus Index of roughly 42, significantly higher than that of India, China, and the United States (Vivid Economics, 2021).

On the individual country-level all EU member countries that are a part of the G20 besides Norway and Italy have their stimulus plan rated net-green (Vivid Economics, 2021). The fact that individual members of the EU supported so many climate-friendly projects on their own means that the EU's political environment was conducive to climate-related spending. Whereas major climate spending marked a shift in policy for the three countries described above, significant climate spending in the EU serves mostly as a continuation of existing policy. The growth of the climate-focused left in many European countries (such as Green parties) has made a favorable environment for climate action, regardless of COVID-19 and COVID-related stimulus (McBride, 2021). In other words, the existing domestic politics of the EU made it conducive in particular to climate change spending stimulus, making it difficult to distinguish the impact of the COVID-19 pandemic on EU climate action.

### **Distributive Conflict and COVID-Related Government Spending**

The existing domestic politics of each country discussed seems to have played the most significant role in determining whether each country invested in climate-related measures in their recovery packages. The role of domestic politics over other factors, such as international agreements and commitments, can be explained by the “distributive conflict” model developed by Aklin and Mildemberger (2020).

The distributive conflict model rejects the “tragedy of the commons model” that describes climate change as a collective action problem and has been adopted by much of academia. Developed by Hardin (1968), the model imagines a common space or common resource that is used and managed by everyone. However, since individuals benefit by maximizing the use of the resource, and the negatives of overusing the resource are distributed among all parties equally, the resource is exhausted (Hardin, 1968). In his classic example, Hardin imagines a common pasture that all members of a village use to graze their sheep. However, some individuals begin overgrazing to maximize personal profit—and are driven by fear of overuse by others—until pasture becomes unusable (Hardin, 1968). In the context of climate change, the tragedy of the commons models individual actors as being incentivized to maximize profits (and by extension, emissions) while avoiding the costs of mitigating climate change and becoming “free-riders” in any solution. In the context of the tragedy of commons, the solution to climate change is figuring out how to make individual actors agree to a long-term goal that is potentially incompatible with their short-term goals.

On the other hand, Aklin and Mildemberger’s distributive conflict model imagines the problem of climate change as a power-driven model and focuses on individual action. The distributive conflict model argues that the tragedy of the commons does not adequately address power dynamics and interest groups and suggests that climate policymaking could be explained without invoking free-riding (Aklin & Mildemberger, 2020). Whether governments choose to implement policies addressing climate change has little to do with the actions of other countries or potential treaties. Instead, climate policies are much more dependent on the specific domestic politics of the country (Aklin & Mildemberger, 2020).

In the context of climate change spending in COVID-related stimulus, the distributive conflict model argues the policy is not developed as part of an international network of actors collectively deciding climate action, with some free-riders relying on the decarbonization of some. Instead, the distributive conflict model argues that climate policy is developed (or not developed) based on the results of individual power struggles taking place at the national level. In the end, despite climate change being a global problem requiring global solutions, countries develop climate policy individually from one another. India is investing in renewables as part of its domestic goals, while the United States is investing in EV infrastructure to satisfy a policy priority of the party currently in charge of most of the government.

Government spending is an ultimate example of “putting your money where your mouth is” – in deciding where and how governments spend their money reveals many of their policy priorities. However, among top emitters, only Europe has invested significantly in renewable energy. The EU’s investment in decarbonization is mostly not the result of commitments to the Paris Climate Agreement or other international treaties. Instead, countries that had already been investing significant resources into decarbonization with domestic support in the form of significant climate-focused left political wings are the countries that continued to invest in climate action.

Moreover, even in the midst of another, more immediate collective action problem of the COVID-19 pandemic itself, the politics surrounding climate change did not seem to shift. In all, one could have easily guessed which countries would have invested in climate change spending in their economic recovery based on what they had spent previously and been correct with considerable accuracy. On the whole, the COVID-19 pandemic did little to change domestic politics surrounding climate change. COP 26 came and went with very little substance to show for it. This all supports the rejection of the tragedy of the commons model in the case of COVID-recovery-related climate change spending. Instead, it provides further evidence that academics should emphasize domestic politics over collective action problems in climate change.

### **The Missed Green New Deal Opportunity**

The economic recovery measures of China, the United States, and India are a missed opportunity for Green New Deal-like stimulus spending. The academic definition of the Green New Deal discussed by Pollin (2019) conceptualizes the Green New Deal spending as large-scale investments in renewable energy and energy

efficiency for the purpose of absolute decoupling. In other words, investments to decouple growth from emissions so that countries may continue economic development without the “price” of increased emissions (Pollin, 2019).

On the surface, the COVID-19 pandemic illustrated a simple, effective path to reducing emissions: degrowth. That is, reducing economic activity and consumption as a means to reduce emissions. Degrowth as a climate change solution would force much of humanity to reevaluate how it structures society. Academics such as Shor and Jorgenson (2019) have suggested degrowth, through means such as reducing the number of working hours, as a legitimate solution to climate change.<sup>5</sup> There is evidence that degrowth would reduce emissions – after all, the initial COVID-19 outbreak in 2020 and the associated economic downturn led to the single largest drop in emissions ever recorded at a magnitude significantly larger than the emissions decreases associated with World War II or previous economic depressions (Liu et al., 2020). However, degrowth and lowered emissions under COVID-19 came at massive costs: namely, millions of deaths and significant economic disruption. The costs of degrowth are simply too high to be considered as a realistic solution to climate change, especially in developing countries.

Instead of degrowth, Green New Deal spending allows governments to continue encouraging economic growth but not growth in emissions. The COVID-19 pandemic prompted many countries to spend billions to trillions as part of their economic stimulus packages. And yet, the spending related to renewable energy and decarbonization was limited. Instead, in places like China, India, and likely the United States (pending legislation), economic growth will be just as carbon intensive as it had been pre-pandemic. In this way, the fact that only a limited amount of the massive amounts of spending in the economic stimulus is a wasted opportunity to provide the Green New Deal spending and strategizing that would avoid the eventual need for and costs of serious degrowth as a planet-saving strategy.

This missed opportunity begs the question: After a series of large investments to address the fallout of COVID-19, what appetite will there be in the near future for large-scale government spending needed for decarbonization?

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<sup>5</sup> It is worth noting that Shor and Jorgenson (2019) limit their proposal to the Global North where emissions have already peaked and avoid discussion of Global South.

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