Building Better

Envisioning a Just, Renewable Future from Coast-to-Coast

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on behalf of
the Center for Law, Energy, and the Environment at Berkeley Law
and Shute, Mihaly, & Weinberger LLP

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Introduction

This research project began as an attempt to compare two states' approaches to achieving carbon neutrality and assessing the environmental justice challenges inherent to this type of large-scale transition. My original intent was to focus on how capping building emissions might affect the affordability of housing in New York City and San Francisco, the two most expensive cities in the United States. Of course, a lot has changed since this project was approved for funding in November. The COVID-19 global pandemic altered everything—from my ability to interview experts to the economics of a zero-carbon future. Because ignoring the effects of the pandemic would be disingenuous and impossible, my project has evolved. The resulting paper proceeds as follows: First, it begins by laying out the status quo of energy usage and greenhouse gas emissions in both New York and California at the state level, as well as in New York City and San Francisco at the city level. Second, it summarizes the climate laws each region has passed, and which parts of the legislation are likely to succeed or pose challenges. Within these challenges, special attention is given to affordability and environmental justice concerns. Finally, it identifies areas for further study, and asks how the COVID-19 crisis will affect efforts toward de-carbonization moving forward. This is not the report I originally envisioned, but I hope very much that readers still find it compelling. I am grateful to have a small voice in the vital conversation about how to ameliorate harm and build a better future.

Why California and New York?

As a former comparative politics major, I am a true believer that examining multiple approaches to a policy problem is the most effective way to learn from our mistakes and find promising solutions. I was drawn to studying New York and California in particular for a few reasons.

For one, they are both huge. California has the largest population of any state in the nation.[1] At nearly 40 million inhabitants, it dwarfs the population of the next largest state, Texas, which is home to just under 30 million people.[2] After Texas and Florida, New York clocks in with the fourth largest population (roughly 19 million people, about half of whom live in New York City).[3] Both states also feature impressive economies: California boasts the fifth biggest economy in the world, and New York the eleventh.[4] Studying the policies of these two states could have implications for how other nations, not just other American states, could combat the climate crisis.

These regions share many other common features. Both California and New York are considered solidly Blue (Democrat) states and New York City and San Francisco are incredibly wealthy, politically liberal metropolises. I was also surprised to learn that San Francisco is the second most densely populated city in America (behind New York City).[5] Both state legislatures lean heavily Democrat, as do the New York City and San Francisco city councils.[6] This means that these political bodies are able to pass ambitious legislation that would likely be dead on arrival in other parts of the United States, or in the federal Congress.

But both municipalities also have a dark side: they feature some of the starkest examples of income inequality in the nation.[7] Both are home to multiple billionaires.[8] And yet both also

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[1] *U.S. Census Bureau*: https://www.census.gov/quickfacts/CA
[2] *Id.*
[3] *U.S. Census Bureau*: https://www.census.gov/quickfacts/NY
[4] *Business Insider Magazine*: https://markets.businessinsider.com/news/stocks/11-mind-blowing-facts-about-new-yorks-economy-2019-4-1028134328#new-york-s-economy-is-almost-the-same-size-as-canada-s-1
[5] *Huffington Post*, "America's Densest Cities": https://www.huffpost.com/entry/americas-densest-cities_b_5888424
[6] *CA state legislature*: http://www.legislature.ca.gov/, *NY state legislature*: https://ballotpedia.org/New_York_State_Legislature, *SF city council*: https://sf.gov/, *NYC city council*: https://council.nyc.gov/
[7] *NPR*, "U.S. Income Inequality Worsens, Widening to New Gap": https://www.npr.org/2019/09/26/764654623/u-s-income-inequality-worsens-widening-to-a-new-gap
[8] *Investopedia*, "Top 9 States with the Most Billionaires": https://www.investopedia.com/financial-edge/0511/top-9-states-with-the-most-

feature double-digit poverty rates.[9] This inequality mirrors a wider, state-wide inequality: both New York and California feature economically depressed, rural, conservative regions that often hold a different set of values and priorities from those reflected by state legislatures. Interestingly, many of the new renewable energy infrastructure projects (in both states, but especially in New York, given that the California is still working on its renewable energy inter-agency report) have the potential to bring new, steady, jobs to areas of the state that could immensely benefit from the increased capital.[10]

With all this in mind, I set out to read everything I could about these two states' transitions to a carbon-free future. Here's a snapshot of what I learned.

New York State

The Climate Leadership and Community Protection Act (CLCPA) passed by the New York Legislature in 2019 laid out four main goals: 1) to limit statewide greenhouse gas emissions to 40% of 1990 levels by 2030 and 85% by 2050, 2) to create a plan that would achieve net zero greenhouse gases across the entire state's economy, 3) to transition to 70% renewable energy by 2030, and 4) to achieve 100% zero emission electricity by 2040.[11]

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billionaires-.aspx#:~:text=Most%20of%20California's%20billionaires%20live,Angeles%20or%20San%20Francisco%20areas.

[9] *Poverty rate San Francisco*: https://sfgov.org/scorecards/safety-net/poverty-san-francisco#:~:text=Citywide,poverty%20than%20other%20age%20groups., *Poverty rate New York City*: https://www1.nyc.gov/site/opportunity/poverty-in-nyc/poverty-measure.page#:~:text=The%20report%20updates%20the%20NYCgov,a%202%20percentage%20point%20decline. In reality this stat is even higher than reported, given that the high cost of housing has forced many low-income people out of these cities, and that the rates have undoubtedly risen since the massive unemployment spike in the wake of COVID-19.

[10] See generally, *NYSERDA, Solar Power World*, "17 Large Scale Energy Projects Planned in Upstate New York": https://www.solarpowerworldonline.com/2020/03/large-scale-solar-projects-planned-in-upstate-new-york/

[11] New York State website, Department of Environmental Conservation https://www.dec.ny.gov/energy/99223.html

To meet these ambitious goals, the State has started by streamlining the regulatory process for renewable project siting and development.[12] State officials are affirmatively identifying sites for projects, permitting these sites in advance, and allowing developers to bid on them.[13] A New-York based source working in this space reported that the effects of these reforms will be huge—by doing this work in advance, the State is effectively protecting the projects from unwarranted NIMBYism[14] which will exponentially speed up project timelines. New York state has also put together an Advisory Committee and will have a draft plan detailing how to meet the goals of CLCPA available for public in about a year. The New York State Energy Research and Development Authority (NYSERA) and Governor Cuomo have doubled down on efforts to build renewable energy projects in rural, upstate New York, where the state economy could most use a boost.[15] The dedication to creating new jobs in the renewable energy sector appears to have only gained momentum in the wake of COVID-19. Governor Cuomo's "Build Back Better" plan reflects the silver lining of current social unrest—perhaps New York state (and the rest of the nation) is ready to commit to systemic change.[16]

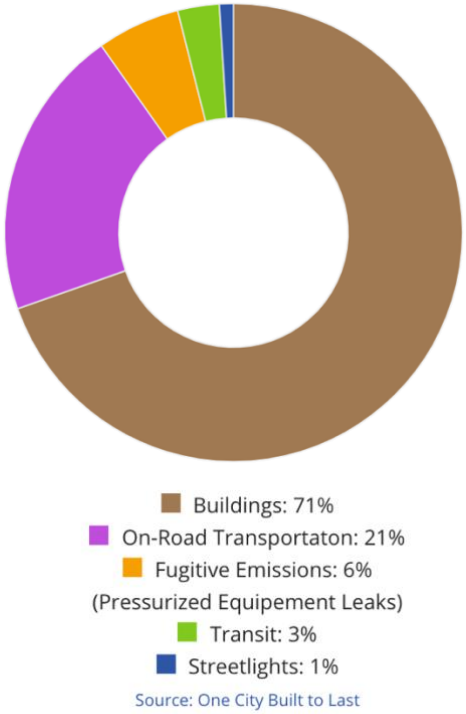
New York City

When I arrived in New York City in the summer of 2019, the environmental law community was abuzz with talk about the new Climate Mobilization Act (CMA). The CMA, which is not actually a single act but instead a package of ten bills, aims to reduce the city's

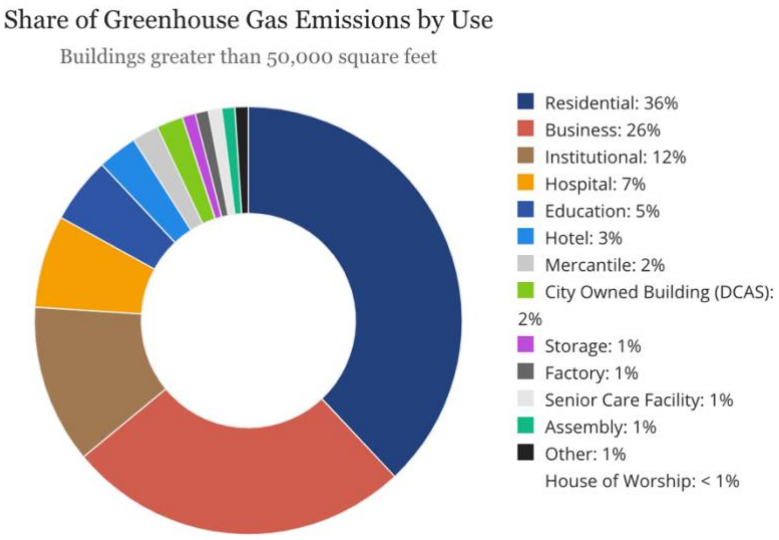
[12] *JD Supra*, "New York Takes Action to Expedite Renewable Energy Siting and Development" https://www.jdsupra.com/legalnews/new-york-takes-action-to-expedite-51913/
[13] *Id.*
[14] NIMBY is an acronym for "Not in My Backyard" and refers to individuals who oppose various development projects in their neighborhoods. https://www.dictionary.com/browse/nimby?s=t
[15] NYSERDA: https://www.nyserda.ny.gov/About/Newsroom/2020-Announcements/2020-03-13-Governor-Cuomo-Announces-Details-for-21-Large-scale-Renewable-Energy-Projects
[16] *NY Forward: A Guide to Reopening New York & Building Back Better*: https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/NYForwardReopeningGuide.pdf

carbon footprint by adopting measures such as reducing greenhouse gas emissions, establishing a Property Assessed Clean Energy (PACE) program, promoting the production of renewable energy over fossil-fuels, and increasing the city's number of 'green roofs,' among other measures.[17] New Yorkers are fond of referring to the CMA as "the largest single carbon reduction effort that any city, anywhere, has ever put forward."[18] And many New York climate activists are strong advocates for enacting similar packages in cities throughout the nation.[19]

They have reason to be excited. As the densest city in the U.S., New York City's current energy-use profile makes it a good candidate for change. According to a city report, the most recent data available estimates that 71% of current emissions come from buildings, with the next highest culprit, 'on-road transportation' clocks in at only 21%.[20] If New Yorkers are able to make their buildings more energy-efficient and/or power these buildings from renewable sources, they will drastically reduce their carbon footprint.



[17] *NY City Council website*: https://council.nyc.gov/press/2019/04/18/1730/
[18] *NYC Progressives website*: https://nycprogressives.com/2019/04/18/new-york-city-passes-climate-mobilization-act/
[19] *Data for Progress* think piece by Pete Sikora: https://www.dataforprogress.org/blog/2019/8/26/nycs-green-new-deal-law-should-be-the-law-in-your-city-too
[20] *NY City Council* data: https://council.nyc.gov/data/green/ , *One City Built to Last* report: http://www.nyc.gov/html/builttolast/assets/downloads/pdf/OneCity.pdf



Of the different types of buildings in New York City, residential buildings account for the majority of greenhouse gas emissions. Accordingly, efforts to reduce energy use by changing habits, replacing inefficient appliances (as the CMA provides for with the creation of a PACE program) and changing the power source of these buildings are all focuses for New York legislators.

The CMA includes bills that seek to reduce these emissions by 1) establishing emissions caps for buildings over 25,000 square feet and establishing an Office of Building Energy and Emissions Performance,[21] 2) requires an assessment of the feasibility of replacing the city's gas-fired power plants with battery storage that is powered by renewables,[22] and 3) equips the roofs of certain smaller, new residential buildings and non-residential buildings with solar panels or green roofs.[23] Of these three measures, the feasibility assessment is likely to continue without much opposition or additional hurdles posed by COVID-19. But there is some consternation that the initial excitement surrounding the CMA may be somewhat frustrated in enacting the remaining two measures.

[21] NYC council data: https://council.nyc.gov/data/green/ , Int 1318 bill text: https://laws.council.nyc.gov/legislation/int-1253-2018/
[22] NYC council data: https://council.nyc.gov/data/green/ , Int 1318 bill text: https://laws.council.nyc.gov/legislation/int-1253-2018/
[23] NYC council data: https://council.nyc.gov/data/green/ , Int 276 bill text: https://laws.council.nyc.gov/legislation/int-0276-2018/, Int 1032 bill text: https://laws.council.nyc.gov/legislation/int-1032-2018/

Capping building emissions and installing green roofs, enacts a cost, and NYC landlords and developers are particularly worried about increasing costs in the midst of the pandemic. Additionally, New York City Mayor Bill DeBlasio had been an ardent champion for the CMA, but as he enters the lame duck period and his time as mayor draws to a close, there is some concern the act will be left vulnerable. In a normal situation, this would not be a huge cause for concern, as the CMA must be amended by the City Council, and it is unlikely that any future city council in a city as politically liberal as New York would see fit to completely dismantle the CMA. Instead, it is more likely that a future city council would adapt the CMA to provide for more flexibility in the wake of the COVID-19 crisis.

Given the extreme economic duress facing both landlords and tenants right now, imposing the additional costs associated with reducing emissions does not appear prudent or particularly feasible. So, while total repeal of the CMA appears unlikely, landlords are likely to have more breathing room than the original act forecasted. Sources who work in the region report that they are advising their landlords and developers to use the delayed timeline to figure out how they will comply with this law, as it is unlikely to go away anytime soon.

California

In the words of one Berkeley Law professor, the Climate Leadership and Community Protection Act and the Climate Mobilization Act get a lot of attention because they are "splashier" than many California laws, but when it comes to GHG emissions reduction and environmental policy, the golden state still leads the nation. Where CMA uses one bill package to attempt to do it all, California's approach is more "death by a thousand cuts." To reduce emissions, Californians rely on a variety of land use, energy production, and energy efficiency

programs at the city, county, and state level. There is, however, one bill that comes close to the scope of the CLPCA, and that is SB-100.

The California Legislature passed SB-100 in September of 2018.[24] The bill's former campaign website describes SB-100 as setting "the bold but achievable goal of powering California—the world's 5th largest economy—with 100% clean, carbon-free electricity by 2045."[25] In order to achieve this goal, SB-100 requires the California Energy Commission (CEC), the California Public Utilities Commission (CPUC), and the California Air Resources Board (CARB) to complete a joint-agency report evaluating the 100% zero-carbon energy policy.[26] This report is slated for completion on January 1, 2021.[27] The scheduled report will use both the public process (including a public comment period, typical notice and comment rulemaking procedures) as well as quantitative analysis.[28] The report will include the following:

1. A review of the 100 percent zero-carbon policy focused on technologies, forecasts, then-existing transmission, and the maintenance of safety, environmental and public safety protection, affordability, and system and local reliability.

2. An evaluation identifying the potential benefits and impacts on system and local reliability associated with achieving the policy.

3. An evaluation identifying the nature of any anticipated financial costs and benefits to electric, gas, and water utilities, including customer rate impacts and benefits.

4. The barriers to, and benefits of, achieving the policy.

5. Alternative scenarios in which the policy can be achieved and the estimated costs and benefits of each scenario.[29]

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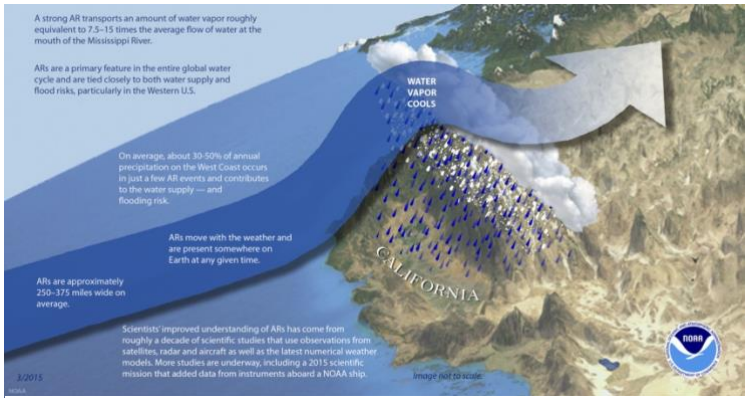
[24] *California Legislative Information* website: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100
[25] CA 100 campaign website: ca100.org
[26] CA Energy website: https://www.energy.ca.gov/sb100
[27] *Id.* Note: this completion date has not been altered due to COVID-19 at this time, though that remains a possibility.
[28] *Id.*
[29] *Id.*

Though this report is ongoing and state agencies are closely guarding information on its progress, a source at one agency confirmed that one of the primary issues facing the drafters of the report is how to make sure the energy grid is equipped to deal with "load pockets" of energy. In other words, energy providers need to make sure that consumers will still have access to energy during peak hours and use times. The same source listed atmospheric rivers—flowing columns of condensed water vapor that roll in from the Pacific Ocean—as a major secondary concern. Analyst are particularly worried about a scenario wherein multiple atmospheric rivers form, blocking sunlight, and thus, solar-powered energy, for days or weeks at a time. Because the January 2021 report is still forthcoming, it is difficult to speculate on the exact problems SB 100 will face. If the state energy agencies are able to find solutions to some of these challenges, the political and economic will to tackle them remains intact.



Source: https://www.noaa.gov/stories/what-are-atmospheric-rivers

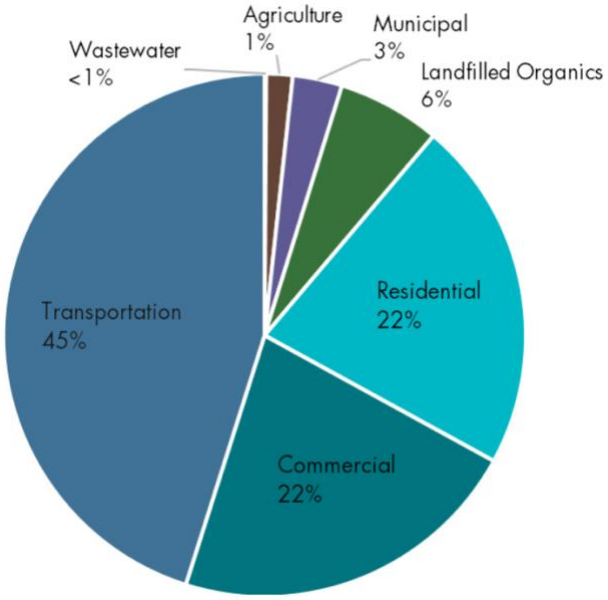
The main environmental justice concern surrounding implementing SB-100 has less to do with a potential standoff between interest groups (ie: landlords and tenants) and more to do with managing strain on an already overloaded system. It is widely accepted that a) California is facing an extreme housing crisis[30] and b) the region's power grid has been pushed to capacity for years, [31] and recent efforts to add renewable sources of energy to the power mix have resulted in

[30] *See, e.g.* Bloomberg: *How California Became America's Housing Market Nightmare*, https://www.bloomberg.com/graphics/2019-california-housing-crisis/
[31] *See, e.g.* U.S. Energy Information Administration: https://www.eia.gov/state/analysis.php?sid=CA; California Energy Commission: https://www.energy.ca.gov/data-reports/energy-maps-california

additional strain.[32]Add in a record-breaking wildfire season and lethal pandemic and you've created a pretty grim backdrop for reform. While the changes proposed by SB-100 are likely to be more indirect than, say, legislation that caps the GHG emissions of residential apartment buildings, Californians should still be concerned about how our most vulnerable citizens will be able to access and afford electricity. We already know that Black, Hispanic, and Native American households spend a much larger percentage of their household incomes paying for utilities.[33] We should redouble our concern in California, where the cost of living is extremely high.

San Francisco and the wider Bay Area

San Francisco earns its reputation as the birthplace of the technology industry by providing some truly impressive data on its own energy usage trends. The SF Environment website is especially informative—this group has kept a timeline of all of San Francisco's climate milestones since its first sustainability plan in 1996.[34] In 2018,[35] SF Environment estimated that emissions from buildings



[32] *Los Angeles Times*, "California invested heavily in solar power. Now there's so much that other states are sometimes paid to take it" https://www.latimes.com/projects/la-fi-electricity-solar/ ; *The Mercury News*, "California grid operator warned of shortfalls as the state transitioned to clean energy"; https://www.mercurynews.com/2020/08/17/california-blackouts-expose-problems-in-states-transition-to-clean-energy/
[33] *Grist*, "Report : Black households spend almost 50% more on utilities than white households" https://grist.org/justice/report-black-households-spend-almost-50-percent-more-on-utilities-than-white-households/
[34] *SF Environnent*: https://sfenvironment.org/climate-milestones
[35] The most recent data available, this report was updated in April of 2020: https://sfenvironment.org/sites/default/files/fliers/files/2018_sfe_ee_climate_at_a_glance.pdf

accounted for 44% of the city's total emissions. It is the second largest source of emissions: transit narrowly edges out buildings at 45%. The difference between this profile and New York City's emissions profile is striking. The implications are clear: while capping the emissions on buildings, particularly commercial buildings, could still do a lot to improve San Francisco's overall carbon footprint, city officials in San Francisco should be much more concerned than those in New York about transportation. Many environmentalists who analyze the Bay Area reach the same conclusion: if the jobs are in the Bay Area but no one can afford to live there, works will subject themselves to longer and longer commutes, resulting in significant amounts of carbon.

The San Franciscan city government seems to realize this as well, it is one of their main goals in their most recent report, Focus 2030: A pathway to net-zero emissions in San Francisco.[36] These goals, which the report identifies as "Strategic Priorities" are loosely sorted into the categories of transportation, buildings, and zero waste. They include:

Transportation:

- Shifting 80% of all trips taken to walking, biking, and transit by 2030
- Electrifying 25% of private cars and trucks by 2030, and 100% by 2040

Buildings:

- Electrifying space and water heating with high-efficiency products such as heat pumps
- Increasing building energy efficiency
- Powering buildings with 100% renewable electricity

Zero Waste:

- Reducing generation by 15% by 2030
- Reducing disposal to a landfill or incinerator by 50% by 2030

[36] *SF Environnent*, Focus 2030 Report https://sfenvironment.org/sites/default/files/fliers/files/sfe_focus_2030_report_july2019.pdf

It is difficult to speculate about how these goals are likely to implicate environmental justice concerns because we are still learning if and how the cost of their implementation will be passed down to the consumer and/or taxpayer. Some issue-areas are easier to predict than others. For example, because California already uses strict tailpipe emissions standards[37], transportation reforms are likely to focus on improving and expanding existing public transit (within the city) and switching to electrified vehicles in the trucking industry[38] (in the state more generally). So the car-driving general public is unlikely to have face increased restrictions on their vehicles, but costs could crop up in a host of other scenarios (for example: higher BART/MUNI/CalTrans fares, higher taxes on gasoline, passing down the cost of revamping transportation systems to consumers via higher city taxes, etc.). The unfortunate reality is that reforms cost money: ensuring that these costs do not fall disproportionately on the city's most vulnerable residents will require constant vigilance. But maybe there is some room for optimism. As the old adage goes, the first step toward solving a problem is admitting you have one. San Francisco is, at the very least, a self-aware city that realizes it is facing its fair share of environmental justice issues. I was heartened to read various stakeholders are committing to improving this reality. For example, SF Environment has awarded over $12 million in environmental justice grants "to promote a healthier, sustainable environment in the Southeast area of the City."[39]

Reading the SF Environment report is bittersweet: it brings to mind all the optimism we had for this new decade, optimism that now appears to be in jeopardy. It remains unclear how the COVID-19 pandemic will affect these proposed reforms. On the other hand, 2020 is poised to be

[37] California Air Resources Board, "California & the Waiver: The Facts" https://ww2.arb.ca.gov/resources/fact-sheets/california-waiver-facts
[38] *NPR*, "California's Landmark Electric Truck Rule Targets 'Diesel Death Zone'" https://www.npr.org/2020/06/26/883634480/californias-landmark-electric-truck-rule-targets-diesel-death-zone
[39] SF Environnent, Environnemental Justice: https://sfenvironment.org/overview/environmental-justice

a year of radical re-imagining. Perhaps this is the decade San Franciscans will find it within ourselves to achieve all of these milestones and more.

Conclusion: Moving Forward

I learned an incredible amount in the process of researching this report, but there is still so much to discover. A few areas I wished I could have dug into deeper are:

- An exploration the carbon footprints of ports in these two cities (and if possible, expanding to include the ports of Oakland, Long Beach, and Los Angeles as well).
- A transportation analysis: in particular of the trucking industry and the supply chain model (this is a huge source of emissions nationally, but is especially prevalent in California).
- A nitty-gritty exploration of city level energy policies and their effects—the renewables leader and investor Saul Griffith offers a fascinating exploration of how hard it is to build the ultimate eco-friendly home in San Francisco, along with other thoughts on how to meet our energy needs sustainably.[40]
- A deeper exploration of how COVID-19 and the resulting economic crisis will change the future of renewable energy.
- A deeper exploration of how the uprising against institutional racism and a willingness to reimagine long-established systems might influence the future of renewable energy and energy policy.

I hope this project encourages its readers to support these and similar policy goals in their own cities and states through the nation and the world.

[40] You can listen to his explanation on *Vox's Ezra Klein Show* here: https://www.vox.com/podcasts/2019/12/16/21024323/ezra-klein-show-saul-griffith-solve-climate-change. I also really recommend checking out his other work: https://www.saulgriffith.com/