

Claremont Colleges

Scholarship @ Claremont

Pitzer Senior Theses

Pitzer Student Scholarship

2021

Building a Just Transition: Creating a Community Engagement Strategy for Building Electrification Policy in the City of Riverside

Emma Barker

Follow this and additional works at: https://scholarship.claremont.edu/pitzer_theses



Part of the [Environmental Studies Commons](#)

Recommended Citation

Barker, Emma, "Building a Just Transition: Creating a Community Engagement Strategy for Building Electrification Policy in the City of Riverside" (2021). *Pitzer Senior Theses*. 125.

https://scholarship.claremont.edu/pitzer_theses/125

This Open Access Senior Thesis is brought to you for free and open access by the Pitzer Student Scholarship at Scholarship @ Claremont. It has been accepted for inclusion in Pitzer Senior Theses by an authorized administrator of Scholarship @ Claremont. For more information, please contact scholarship@cuc.claremont.edu.

Building a Just Transition:
Creating a Community Engagement Strategy for Building Electrification Policy in the City
of Riverside

Emma Barker

May 2021

Bachelor of Arts Degree in Environmental Analysis

Pitzer College

Claremont, CA

Readers:

Professor Susan Phillips

Professor Lance Neckar

Acknowledgements

I owe a debt of gratitude to Professor Susan Phillips and the Robert Redford Conservancy for Southern California Sustainability for connecting me to the city of Riverside and making this project possible. I also appreciate all of the guidance that Professor Phillips provided me throughout the project and writing process. Thank you to Professor Lance Neckar for his insights into the specifics of financing and energy storage regarding electrification. Professor Melinda Herrold-Menzies guided me through each step of the process, and her eagle-eye improved my writing immensely. I am appreciative of the opportunity that Caleb Ragan and Councilmember Ronaldo Fierro provided me to work with them on this project and the many local organizations in Riverside who worked with me and committed to the goal of increasing equity in building electrification. Finally, I would like to thank my friends and family for their love and support.

Abstract

This project sought to promote a just transition to building electrification in the city of Riverside, California through a community engagement process that prioritized equity. Policy that reduces greenhouse gas emissions in a way that corrects environmental injustice rather than contributing to it further is crucial as the disastrous impacts of climate change continue to increase in intensity and frequency. In Riverside, challenges in creating opportunities for meaningful engagement included the Covid-19 pandemic, an absence of trust between community organizations and the local government, and the limited timeline and budget of the project. However, by cultivating relationships with local organizations, and planning an ambitious community engagement strategy, Riverside has taken steps to involve communities in a building electrification policy that will contribute to the public health, environmental justice, and housing affordability of the city as a whole. The project avoids a technocratic form of climate policy and instead opts for one that centers frontline communities and promotes a just transition. The challenges that this method faces are described, including managing competing objectives and building trust with communities long ignored by traditional policy-making processes. Substantive community outreach can transform building electrification from technocratic environmental legislation to a policy that corrects past environmental injustice and builds a more resilient future for all.

Key Words: Electrification, Riverside, Just Transition, Community Engagement, Equity

Table of Contents

Introduction	1
Background	4
Electrification and Engagement Toolkits	11
Methodology	18
Literature Review	19
Analyzing the Process behind Riverside’s Electrification Policy	28
Conclusion	41
Appendix 1: Community Engagement Map	44
Appendix 2: Riverside’s Community Engagement Plan for Building Electrification	45
Appendix 3: Riverside’s Building Electrification Policy Memo	49
Bibliography	57

Introduction

In 2018, the city of San Francisco took on an ambitious building electrification policy-making process, led by two local environmental justice organizations that would engage over 250 community stakeholders over the course of three years. The city approached the possibility of electrification with an equity-lens and incorporated the voices of frontline communities and activist groups in the countless impacted sectors including: tenants groups, affordable housing, labor, environmental justice, contractors, and architects.¹ These groups met many times over the three years, and analyzed all of the potential impacts of electrification on communities in order to achieve a policy that would be environmentally and economically just.² It was through reading about San Francisco that I began to realize how electrification policy could go beyond a technical solution to limit greenhouse gas emissions to one that sits at the very nexus of environmental justice, sustainability, community engagement, and policy. I also saw a sharp contrast between this process in San Francisco with its extensive timeline, budget, and scope, and the plan that I was developing for the city of Riverside, CA. While San Francisco served as an inspiration, it would be an immense challenge to achieve a similar process in a city like Riverside, where the political landscape, timeline, budget, and organizing history were completely different.

I was originally introduced to building electrification through my work with the Robert Redford Conservancy for Southern California Sustainability. The Conservancy is developing a relationship with the city of Riverside, and was looking for students to work with the city to develop policy in connection with their Climate Action Plan. After an initial meeting with Caleb

¹ “Climate Equity & Community Engagement in Building Electrification: A Toolkit” (Emerald Cities Collaborative and PODER, 2020), https://nmcndn.io/e186d21f8c7946a19faed23c3da2f0da/9bb11a106d6f43d5ae8118a05a071e96/files/resources/Climate-Equity-and-Community-Engagement-Toolkit_Nov102020.pdf, 38.

² “Climate Equity & Community Engagement in Building Electrification: A Toolkit,” 37.

Ragan, a city staff member for Councilmember Ronaldo Fierro, we decided that building electrification would be an opportunity for me to support the city while connecting to my own interests in sustainability within the built environment and environmental justice. While I knew practically nothing about electrification or what it would mean for a city to implement this type of policy, as I began my research process it became clear the significance of electrification policy and the potential pitfalls that make this work so important.

When viewed as a technocratic solution to climate change, electrification can harm the most marginalized populations of an area through job loss, utility hikes, and displacement. In taking on the role of Outreach and Community Engagement Fellow, I worked to ensure that this policy did not produce an unfair burden on communities already most impacted by environmental and economic injustice. In Riverside, I faced challenges in creating opportunities for meaningful engagement including a lack of relationships between community organizations and the city, the coronavirus pandemic, and the timeline of the project. Nevertheless, I worked with the city to create a community engagement map, beginning to form relationships with local organizations, and writing a detailed community outreach plan. Riverside, in a county that received an “F” on ozone and particle pollution by the American Lung Association,³ is on a path to involve communities in a building electrification policy that will remove harmful pollutants from the home, create safe and fair green jobs, and incentivize the construction of sustainable affordable housing. Instead of a technocratic solution for clean energy, with a thoughtful and substantive community engagement process, building electrification poses an opportunity to model a just transition by increasing climate resilience and taking steps to correct past environmental injustices.

³ “California: Riverside,” American Lung Association, 2019, [/research/sota/city-rankings/states/california/riverside](https://www.amlung.org/research/sota/city-rankings/states/california/riverside).

This research highlights the need for a just transition as governments across the country create policies that continue to favor corporations and to harm marginalized communities in the name of a sustainable solution for all. In tackling climate change, we will have to start creating policy that forces society away from polluting industries and provides a cleaner and safer world. With a focus on equity and environmental justice, my project prioritizes those who are both most impacted by climate change now, and will be most affected by this policy in the future. Equity is a lens through which all policy-making should happen, particularly when tackling climate change, which is already impacting certain communities more severely than others. The project advocates for a shift from a technocratic and neoliberal model of climate policy into one that centers community voices. It also elaborates on the challenges that this method faces, in the balancing of different interest groups and in building trust with communities who have never before been included in policy making efforts.

More specifically, this project and policy will provide a framework for and inspire other cities within Southern California and around the country to start taking action on climate change locally in an equitable and impactful way. The passing of the policy itself will inspire local cities who have expressed interest in electrification to take action. As the first city in the Inland Empire to explore this possibility, a building electrification policy here has the potential to cause a ripple effect throughout the area. This is important as the built environment plays a critical role in tackling the climate crisis.

In my role as Community Engagement and Outreach Fellow, I worked with Caleb Ragan and Councilmember Ronaldo Fierro to research electrification policy, best practices from other cities, and community participation. Using this information, I created an engagement strategy for the city including a community engagement map,⁴ and organized meetings with stakeholders in

⁴ See Appendix 1

public health, affordable housing, environmental justice, business, and low-income communities. The content of these meetings and my research on just transition influenced the policy memo written by city staff.⁵ While the timeline for the policy-making process originally allowed for only two months of engagement, it was extended by six months. With the additional time, I created a detailed community engagement plan⁶ with recommendations for how the city will create opportunities for meaningful participation from impacted communities in the coming summer months.

In this accompanying paper, I start by explaining what building electrification is and why it is important to public health and environmental sustainability. I then describe the significance of this policy within the context of the city, and evaluate the existing frameworks for building electrification and how they apply to my own work in Riverside. I explain the methodology of the project itself, including a policy-making timeline and community map. My literature review delves into the theories of energy justice, just transition, and community participation in policy-making. Finally, I describe the process of community engagement and working with the city to create this policy, the challenges that we came across in trying to create an equitable engagement strategy, the deliverables that were produced throughout this effort, and next steps as the process continues into the summer and fall.

Background

Building Electrification: What is it and why?

In a country where we are seeing the impacts of climate change on an immense scale, policy must be created to reduce greenhouse gas emissions wherever possible. Electrification

⁵ See Appendix 3

⁶ See Appendix 2

policies offer solutions at the systems scale and in buildings. One quarter of greenhouse gas emissions originate in buildings,⁷ and one tenth of carbon emissions in the United States come specifically from emissions from heating and cooking in buildings.⁸ Natural gas furnaces and appliances cause greenhouse gas emissions and a severe public health problem from exposure to indoor pollutants. A forthcoming United Nations report on methane emissions from natural gas explains the bleak scenarios for inaction at the systemic scale.⁹ In order to meet targets for emission reduction in the 2050 Biden Plan, cities must address one of the most polluting aspects of society: the built environment.¹⁰ Mandating that buildings eliminate natural gas as an energy source and use electricity for all energy needs including principally heating, cooking, and water pumps is a critical step. In the face of such a monumental problem, building electrification offers a promising solution. While a municipal electrification policy itself can take many different forms, including a natural gas ban on new construction or incentivizing electric appliances and retrofitting existing homes, the goal is the same: promote a shift from fossil fuels in the home to electricity from renewable sources. A study of seven US cities found that new single family all electric houses resulted in an 80% carbon emissions reduction as compared to their counterparts with natural gas appliances.¹¹ This result reflects the substantial impacts of gas appliances

⁷ “Equitable Building Electrification: A Framework for Powering Resilient Communities” (Oakland, California: Greenlining, 2019):9, https://greenlining.org/wp-content/uploads/2019/10/Greenlining_EquitableElectrification_Report_2019_WEB.pdf.

⁸ “The Impact of Fossil Fuels in Buildings” (Rocky Mountain Institute, 2019), <https://rmi.org/insight/the-impact-of-fossil-fuels-in-buildings/>.

⁹ Hiroko Tabuchi, “Halting the Vast Release of Methane Is Critical for Climate, U.N. Says,” The New York Times, April 24, 2021, sec. Climate, <https://www.nytimes.com/2021/04/24/climate/methane-leaks-united-nations.html>.

¹⁰ Claire McKenna, Amar Shah, and Leah Louis-Priscott, “All-Electric New Homes: A Win for the Climate and the Economy,” Rocky Mountain Institute, October 15, 2020, <https://rmi.org/all-electric-new-homes-a-win-for-the-climate-and-the-economy/>.

¹¹ McKenna, Shah, and Louis-Priscott, “All-Electric New Homes.”

including stoves, water heaters, and furnaces, which account for 50% of energy usage in the home.¹²

It is equally important to examine the public health impacts of natural gas appliances in buildings, particularly in the residential setting. A 2014 study of natural gas pollutants found that when gas stoves are running in the home, the air quality can exceed EPA standards,¹³ making it so dangerous it would be illegal if outdoors.¹⁴ The *New York Times*, summarizing the conclusions of the U.N. study, states that "rolling back methane emissions would prevent more than 250,000 premature deaths, and more than 750,000 asthma-related hospital visits, each year from 2030 onward."¹⁵ Children who grow up in homes with gas stoves are 42% more likely to have asthma.¹⁶ Natural gas appliances also run the risk of causing explosions, fires, and dangerous leaks.¹⁷ Even ignoring the environmental impact of natural gas appliances, the impacts on public health are so severe they must be considered.

Finally, there are a number of benefits of going all-electric when it comes to housing affordability. A cost-feasibility study conducted by the statewide codes and standards team of California found the building electrification is cost effective. In fact, for new construction, buildings without natural gas are \$5,000 cheaper to construct for single family homes, and

¹² McKenna, Shah, and Louis-Prescott, "All-Electric New Homes."

¹³ Jennifer M. Logue et al., "Pollutant Exposures from Natural Gas Cooking Burners: A Simulation-Based Assessment for Southern California," *Environmental Health Perspectives* 122, no. 1 (January 1, 2014): 43–50, <https://doi.org/10.1289/ehp.1306673>.

¹⁴ Brady Seals and Andee Krasner, "Gas Stoves: Health and Air Quality Impacts and Solutions," Rocky Mountain Institute, 2020, <https://rmi.org/insight/gas-stoves-pollution-health/>.

¹⁵ Hiroko Tabuchi, "Halting the Vast Release of Methane Is Critical for Climate, U.N. Says," *The New York Times*, April 24, 2021, sec. Climate, <https://www.nytimes.com/2021/04/24/climate/methane-leaks-united-nations.html>.

¹⁶ "The Building Electrification Equity Project" (Emerald Cities Collaborative, April 2020):9, https://nmcndn.io/e186d21f8c7946a19faed23c3da2f0da/9bb11a106d6f43d5ae8118a05a071e96/files/BEE_Report_Final.pdf.

¹⁷ Matthew Gough, "California's Cities Lead the Way to a Gas-Free Future | Sierra Club," Sierra Club, January 25, 2021, <https://www.sierraclub.org/articles/2021/01/californias-cities-lead-way-gas-free-future>.

\$1,500 cheaper per unit in a multifamily dwelling.¹⁸ This allows for the opportunity to use electrification as a means for creating more affordable housing. The story is slightly different for the cost of running the home. While natural gas is technically cheaper in utility bills than electricity, that is not the case with ultra-efficient appliances, which are becoming standard. For example, electric units that combine heat and air conditioning are actually cheaper to run than those powered by natural gas.¹⁹ Another consideration is that as an all-electric mandate takes effect, fewer gas appliances will likely lead to an increase in gas utility bills for those residents still occupying homes with gas.²⁰ This will make electricity the more affordable option, but there are considerable equity implications in this transition given that low-income households living in homes with natural gas will now be shouldering the burden of the change.

The Purple City: Focusing on California and Riverside

When exploring the possibility of building electrification policy, considerations like environmental impact and cost are not consistent across the country. Therefore I will be focusing on the context of California specifically. For example, a study was conducted of the economic and environmental impact of building electrification in six cities in California.²¹ It found that while electrification may not be a cleaner alternative in all places depending on how the area produces its electricity, with California heading toward zero-carbon electricity generation by 2045, and already well on its way, it is a prudent choice for the state.²² Currently all-electric

¹⁸ Frontier Energy, Inc. and Misti Bruceri & Associates, LLC, “2019 Cost-Effectiveness Study: Low-Rise Residential New Construction” (California Energy Codes & Standards, August 1, 2019), <file:///Users/emma/Downloads/2019%20Res%20NC%20Cost-eff%20Report.pdf>.

¹⁹ Frontier Energy, Inc. and Misti Bruceri & Associates, LLC, “2019 Cost-Effectiveness Study,” 33.

²⁰ “Equitable Building Electrification: A Framework for Powering Resilient Communities” (Oakland, California: Greenlining, 2019), https://greenlining.org/wp-content/uploads/2019/10/Greenlining_EquitableElectrification_Report_2019_WEB.pdf, 25.

²¹ Amber Mahone, Charles Li, and Zack Subin, “Residential Building Electrification in California” (San Francisco: Energy and Environmental Economics, Inc., April 2019):1, https://www.ethree.com/wp-content/uploads/2019/04/E3_Residential_Building_Electrification_in_California_April_2019.pdf.

²² Mahone, Li, and Subin, “Residential Building Electrification” 4.

buildings reduce greenhouse gas emissions by 30-60%, and will result in 80-90% greenhouse gas savings with zero-carbon electricity generation.²³ An important consideration for California is that milder climates result in a lower cost for electricity while in colder climates, the change is more expensive.²⁴ Because of the state's goal of carbon neutrality by 2045, 40 cities and counting in California have electrification policies in place to reduce their environmental impact and be prepared to meet these targets.²⁵ These policies are called reach codes, which allows cities to institute stricter or more specific building codes that surpass the state mandates.

This is what the city of Riverside is hoping to accomplish. Because every city is different and is working within its own set of social, political, and economic parameters, every electrification policy is unique. For example, in Oakland, all new construction must be all-electric, similar to San Francisco. San Jose offers some limited temporary exemptions, and other cities have excused labs, cooking equipment, affordable housing, and smaller multi-family units from the code.²⁶ While Riverside is looking to make the most stringent code possible, the circumstances of the city and the results of the community engagement process will determine what concessions will be made and what is politically feasible. Already, a goal of all-electric new construction has been constricted to just low-rise buildings.

Riverside's recent political history provides important context into how this type of policy came about. The city is described by officials as a *purple city*, fairly evenly divided on the political spectrum. The mostly old, white, male, and conservative city government was completely transformed in the 2019 election. The new city council is more diverse with a much more progressive agenda. While some of the former council members had questioned the validity

²³ Mahone, Li, and Subin, "Residential Building Electrification" 4.

²⁴ McKenna, Shah, and Louis-Prescott, "All-Electric New Homes."

²⁵ Matthew Gough, "California's Cities."

²⁶ Matthew Gough, "California's Cities."

of human-caused climate change, the new council quickly put together a Climate Action Plan with the intention of making Riverside a leading sustainable city, and using this identity to attract businesses and opportunities for its residents. One element of this plan is a building electrification policy which will eliminate natural gas in new construction and help the city drastically reduce its greenhouse gas emissions. While Riverside is in a much different political and economic context than other leading cities in this policy like Berkeley and San Francisco, it would be a major feat to pass an electrification policy here. Riverside would be a leader of electrification in Southern California, and could set off a chain reaction with other cities following suit once electrification is proven to be politically and economically feasible. The economic and political advantage that Riverside has over other cities is the fact that the city owns its own electric utility. This means that it not only has motivation for expanding electricity use over gas in the city, but also the funds to ease the burden of this transition.

This is crucial in Riverside, where economic and environmental justice will be important considerations in the creation and impact of this policy. As one can see in the maps below, much of Riverside is considered disadvantaged and low-income communities by the state of California, and the city receives some of the worst scores from CalEnviroScreen, which measures vulnerability to pollution across the state.

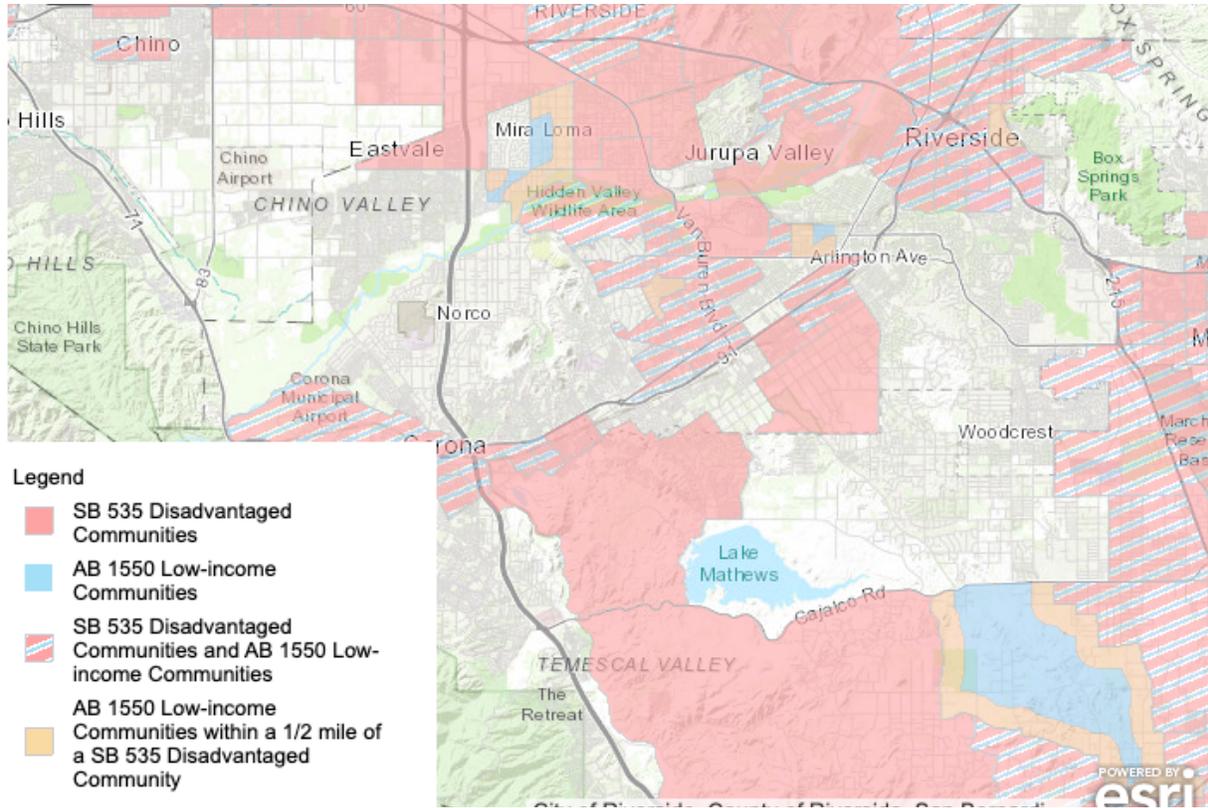


Figure 1. Disadvantaged and Low Income Communities in Riverside map by the California Air Resources Board.

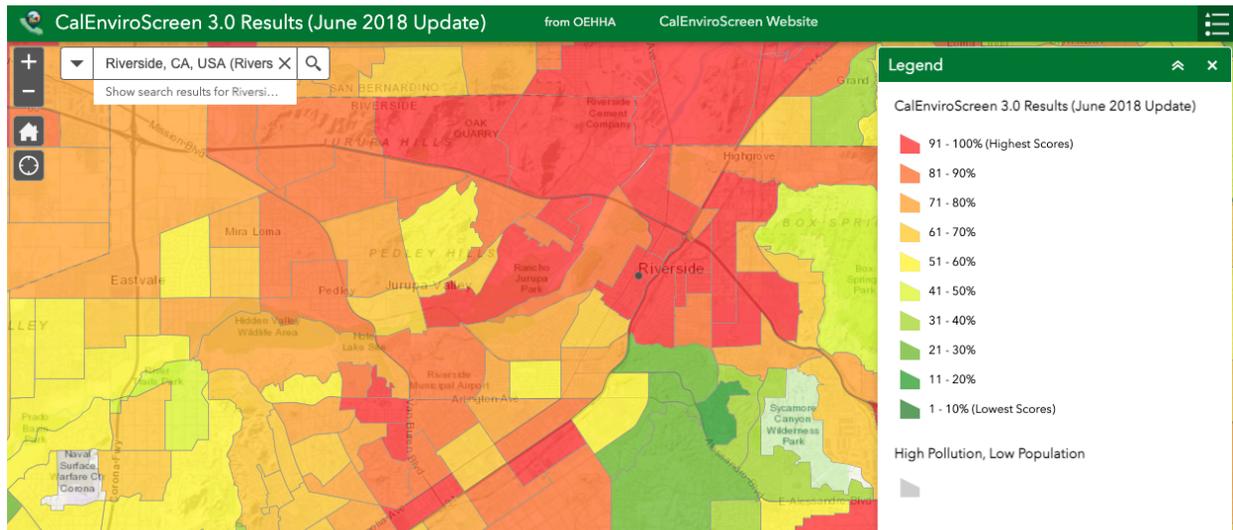


Figure 2. Map of Pollution in Riverside by CalEnviroScreen.

This puts Riverside in a position where an electrification policy is critical, as the city's poorest residents are already the most impacted by environmental degradation and pollution, but also would be the most negatively impacted by a policy that wasn't carefully designed to remove barriers and inequitable burdens in the transition. This is why the policy-making process must incorporate a substantive and thoroughly-executed community engagement strategy, which was my task for this project. In the city of Riverside, the majority of the population, an estimated 53%, is hispanic or latino.²⁷ Almost a quarter of residents are first generation immigrants, and 45% speak a language other than English spoken in the home.²⁸ The poverty rate sits at 14%, with 10% of people lacking health insurance, and 13% lacking internet access.²⁹ These statistics are important to understand the impact of this policy: the potential cultural impacts of gas cooking, the public health concerns of natural gas in relation to insurance, and the uneven impact of pollution and environmental injustice on latino communities. But it was also relevant in defining and planning community outreach strategies. Most significantly, internet accessibility and language justice became central factors in the community engagement plan.

Electrification and Engagement Toolkits

I examined three policy frameworks on building electrification with an equity lens to influence Riverside's engagement strategy. These frameworks represent an informative foundation for my work, but there is no cookie-cutter approach to creating this type of policy, and accordingly my process changed course from these frameworks as I understood the specifics of Riverside. Most notably these specifics are: the tight timeline, the lack of existing

²⁷ "U.S. Census Bureau QuickFacts: Riverside City, California," United States Census Bureau, 2019, <https://www.census.gov/quickfacts/riversidecitycalifornia>.

²⁸ "U.S. Census Bureau QuickFacts," 2019.

²⁹ "U.S. Census Bureau QuickFacts," 2019.

relationships between the city and community based organizations, and the desire of local government to market itself as a leading “green” city.

<p>(1) Process: Have marginalized communities participated meaningfully in the policymaking process with sufficient support?</p>	<p>(2) Restoration: Does the policy aim to remedy prior and present harms faced by communities negatively impacted by the energy system?</p>	<p>(3) Decision-making: Does the policy center the decision-making of marginalized communities?</p>	<p>(4) Benefits: Does the policy center economic, social, or health benefits for marginalized communities?</p>	<p>(5) Access: Does the policy make energy more accessible and affordable to marginalized communities?</p>
---	---	--	---	---

Figure 3. Energy Justice Scorecard created by The Building Electrification Workbook.

Transitioning to an all-electric future in the built environment of Riverside is deeply connected to the principles of energy justice and just transition. The Energy Justice Workbook offers a scorecard (figure 3), which ranks the process, restoration, decision-making, benefits, and access of a given climate policy and process³⁰ and one which I used to assess different policy considerations within Riverside. Beyond these general strategies and principles, several organizations have created frameworks specifically for building electrification policy in which equity is the driving force rather than an afterthought. I used these frameworks to guide my community engagement plan,³¹ but because every city is different I did not use the exact same strategies or order that these frameworks lay out. First, I am going to discuss the Building Electrification Equity Project, which highlights specific equity concerns within building electrification. Next I will compare two policy-making frameworks which I used as the basis of my outreach.

The Building Electrification Equity Project was a six month effort to engage organizations and policy makers in understanding the need for electrification of the built environment in an environmentally just way. The Emerald Cities Collaborative put together a

³⁰ Shalanda Baker, Subin DeVar, and Shiva Prakash, “The Energy Justice Workbook” (Initiative for Energy Justice, December 2019), <https://iejusa.org/wp-content/uploads/2019/12/The-Energy-Justice-Workbook-2019-web.pdf>.

³¹ See Appendix 2

report with key findings from this process, which incorporates the concept of just transition. The main point of the report was to encourage stakeholders to avoid the technocratic perspective of “clean energy,” which results in negative impacts for communities much the same as other types of energy.³² For example, a study of three clean energy policies in the United States found that without specific equity targets and language, this legislation would harm marginalized communities.³³ A clean energy financial incentive program was distributed less often to hispanic communities, a utility smart-meter roll out favored certain neighborhoods over others, and a municipal green building adoption strategy did not translate to the private sector.³⁴ Electrification if done properly and with substantive community input can be part of an environmental justice solution, but done poorly it can just as easily continue to contribute to the problems of environmental injustice, environmental racism, and political support of industry rather than people. In order to avoid this trap, incorporating community input and bringing different stakeholders together to work on solutions is key. Some specific foci of the report were cultural, housing, and economic impacts.³⁵

Through the Emerald Cities Collaborative’s research, they found that gas cooking has a strong cultural tie to many communities. Because of the overlap between environmental justice communities and cultural cooking with natural gas, it is problematic for a government to insist that certain groups give up a practice of cultural importance to lessen environmental impacts that other groups are largely responsible for creating in the first place. The report stresses the

³² “The Building Electrification Equity Project” (Emerald Cities Collaborative, April 2020), https://nmcdn.io/e186d21f8c7946a19faed23c3da2f0da/9bb11a106d6f43d5ae8118a05a071e96/files/BEE_Report_Final.pdf.

³³ Shan Zhou and Douglas S. Noonan, “Justice Implications of Clean Energy Policies and Programs in the United States: A Theoretical and Empirical Exploration,” *Sustainability* 11, no. 807 (February 3, 2019), <https://doi.org/doi:10.3390/su11030807>.

³⁴ Zhou and Noonan, “Justice Implications of Clean Energy Policies and Programs in the United States: A Theoretical and Empirical Exploration,” 15.

³⁵ “Electrification Equity Project.”

importance of incorporating the discussion of cooking and its cultural value into workshops with community groups.³⁶

Housing is one of the most obvious potential impacts of electrification policy, and it is crucial to take steps to avoid punishing people with lower incomes through this policy. There are several elements to housing that need to be considered: the cost of utility bills for residents,³⁷ because electricity can be more expensive than natural gas; the construction of new affordable housing, which could be limited due to increased cost; displacement, similarly resulting from an increase in more expensive new construction; and the possibility of existing housing being neglected in a policy that focuses on new construction.³⁸ In fact, the diminishing customer base will cause the cost of natural gas to rise as more people electrify, leaving low income residents of existing housing who are left behind with higher bills.³⁹ All of these potential pitfalls require careful consideration and community involvement. The Electrification Equity Project recommends a tactic of “Equity First” building electrification, in which, instead of removing low income housing from the equation through exemptions, cities specifically target this housing for city-funded upgrades and integrate with other measures like water and energy efficiency.⁴⁰ This transfer is not possible without intervention and the government cannot rely on market forces to shift to all-electric new construction in an equitable way.⁴¹

As with housing, the report outlines many economic concerns with building electrification, the two main ones being impacts on the workforce and local businesses. Special

³⁶ “Electrification Equity Project,” 15.

³⁷ “Equitable Building Electrification: A Framework for Powering Resilient Communities” (Oakland, California: Greenlining, 2019), https://greenlining.org/wp-content/uploads/2019/10/Greenlining_EquitableElectrification_Report_2019_WEB.pdf.

³⁸ “Electrification Equity Project,” 5.

³⁹ “Equitable Building Electrification,” 17.

⁴⁰ “Electrification Equity Project,” 25.

⁴¹ “Equitable Building Electrification,” 22.

attention should be given to electrification's impact on small local businesses. Because of the change in construction demands in the shift from natural gas to electric, workers will also be impacted.⁴² These changes can be remedied through inclusion of labor groups in the policy-making process and the provision of skills training to allow for former natural gas workers and other community members to gain safe well paying jobs under the new system.⁴³

The Emerald City Collaborative pays particular attention to underrepresented groups, suggesting requirements for diversity in the workforce: training and hiring for women, immigrants, people of color, formerly incarcerated people, etc.⁴⁴

An Equitable Process

The Building Electrification Equity Project report introduced a structure of research, education, and community outreach efforts in order to develop electrification policy, but did not get into the specifics of how this would play out. However, a toolkit formed in partnership with the Emerald Cities Collaborative and PODER in San Francisco called “Climate Equity & Community Engagement In Building Electrification” laid out a much more specific strategy. The underlying concept of the toolkit, which fits into the just transition and community engagement theory I will cover later, argues that the process cannot only include “experts” and officials: “if the individuals that are engaged in these processes are not reflective of the social, cultural and economic demographics of the community to be served, then the process will not yield equitable climate solutions.”⁴⁵

⁴² “Electrification Equity Project,” 5.

⁴³ “Equitable Building Electrification,” 25.

⁴⁴ “Electrification Equity Project,” 6.

⁴⁵ “Climate Equity & Community Engagement in Building Electrification: A Toolkit” (Emerald Cities Collaborative and PODER, 2020), https://nmcndn.io/e186d21f8c7946a19faed23c3da2f0da/9bb11a106d6f43d5ae8118a05a071e96/files/resources/Climate-Equity-and-Community-Engagement-Toolkit_Nov102020.pdf, 4.

According to the Emerald Cities Collaborative, the first step in this process is collecting data about the area including socio-economic demographics, energy burdens, housing stability, environmental justice, the workforce, and existing community organizations.⁴⁶ The results of this first step will look completely different depending on where in the country or the world this research is being done, and was particularly important for me to complete as a relative outsider to the Riverside community. The main take-aways from my data collection process were the immense impact of pollution from the logistics industry in Riverside, the low number of local community organizations in the area, the political balance, and high percentages of potential impacted groups including people of color, people in poverty, and renters. The information gathered about existing community organizing is critical to the next steps of the engagement process which include forming a leadership group of community members, identifying a facilitator, and design community engagement workshops that make sense given the context of the particular community.

The toolkit emphasizes an asset based approach by defining where the community is succeeding, and where skills and resources lie.⁴⁷ Similarly, the first steps in the Greenlining Institute's "Equitable Building Electrification Framework" entail assessing the community needs, and creating a community-led process.⁴⁸ While the Climate Equity toolkit does mention the need for follow-through after the policy is created, the focus is on the community engagement process. The Equitable Building Electrification Framework, however, suggests a plan for tracking outcomes both qualitative and quantitative, ensuring funding for any subsidies and

⁴⁶ "Climate Equity & Community Engagement in Building Electrification: A Toolkit," 16-19.

⁴⁷ "Climate Equity & Community Engagement in Building Electrification: A Toolkit," 11.

⁴⁸ "Equitable Building Electrification," 6.

government-led programs, and reflecting on and improving outcomes after the policy is initiated.⁴⁹

Defining Community

Because the primary focus of these toolkits center on the engagement process, a main question is how to define who the community is, and who to target in outreach efforts. The toolkit recommends reaching out to community based organizations (CBOs) that are trusted within the community, as they are best prepared to organize, work with, and engage community members on building electrification. In addition, the other obvious stakeholder organizations are: workers rights organizations and unions, resident groups, and environmental justice, racial justice, and housing justice organizations. The toolkit stresses the importance of incorporating several different organizations to represent the many groups impacted.⁵⁰ This part would become a challenge for me working in Riverside, because of the lack of community organizations specific to Riverside and the lack of trust and relationships between these organizations and the city government.

These reports provide important insights on how to approach electrification policy in an environmentally just way, but are not exhaustive as each city will undergo specific challenges. Given the scope of the project, my research is less extensive than these frameworks. Instead, I am incorporating as much community input as possible within the city's parameters, building relationships with local organizations, and coming up with a strategy that will push the city towards a more equitable process this summer. Riverside has its own challenges which I will elaborate on later, that dictate how much of this work takes place. By documenting this process, my hope is that other smaller cities can apply the lessons learned from Riverside to their own

⁴⁹ "Equitable Building Electrification," 40.

⁵⁰ "Climate Equity & Community Engagement in Building Electrification: A Toolkit," 11.

electrification policies, and will incorporate a just transition framework and a significant community engagement process, as these components are necessary to create a truly effective policy.

Methodology

In taking on this project, I partnered with the office of City Council Member Ronaldo Fierro in Riverside. Caleb Ragan, a staffer for the Councilmember, was my primary point of contact; we met weekly to discuss progress and next steps. My role was focused on community outreach and stakeholder engagement, with a priority on hard-to-reach communities and those most impacted by environmental justice issues. I used the equity-focused building electrification frameworks discussed above to inform my own community engagement plan. Next, I made a community map,⁵¹ highlighting different groups to reach out to. Using the toolkit from Emerald Cities Collaborative as a guide, I brainstormed with Caleb and researched different organizations and community groups who would have a vested interest in this policy, and could connect us with community members who will be most impacted. I organized these different groups into stakeholder categories, including Labor, Public Health, Environmental Justice, Business, Housing, Low Income, and Universities. I scheduled preliminary meetings with organization leaders that were attended by Caleb, the Councilmember on occasion, and myself. The information gathered in these meetings influenced a policy memo written by the Councilmember's office,⁵² making sure to incorporate specific language about just transition. I wrote a community engagement plan, detailing a strategy for meaningful community participation.⁵³ This is where we are currently in the process, but the next steps involve

⁵¹ See Appendix 1

⁵² See Appendix 3

⁵³ See Appendix 2

organizing town hall meetings for community members and a stakeholder working group that will meet with the Councilmember regularly throughout the summer. Though the engagement process has faced many challenges, with this strategy Riverside will begin to incorporate communities often overlooked in the past, on this policy and in future endeavours.

Literature Review

The creation of this electrification policy requires an exploration of the theory relevant to: energy justice, just transition, and the policy-making process. Most broadly, I will be grounding my work in the writings of several scholars on just transition and energy justice theory. While this work is not specific to electrification I find a strong connection to the local work in Riverside and other cities in the United States when examining how specific communities are most impacted by changes in energy policy. Next, I will be exploring writings on incorporating community in the policy-making process, and theory around the notion of expertise versus lived experience. These texts are central to the way that I engaged communities, and strongly influenced my organizational outreach plan. All of the work I am reviewing grounded my own research and process, and provided me with the tools to approach this project from an environmental justice perspective.

Energy Justice

Before specifically defining energy justice, I want to introduce its importance as illustrated by the authors of “Making the Ethical and Philosophical Case for ‘Energy Justice.’”⁵⁴ They outline two major principles, the first being the prohibitive principle, which “states that energy systems must be designed and constructed in such a way that they do not unduly interfere

⁵⁴ Benjamin R. Jones, Benjamin K. Sovacool, and Roman V. Sidortsov, “Making the Ethical and Philosophical Case for ‘Energy Justice,’” *Environmental Ethics* 37, no. 2 (2015): 145–68, <https://doi.org/10.5840/enviroethics201537215>.

with the ability of any person to acquire those basic goods to which he or she is justly entitled.”⁵⁵ This requires consent from people impacted by any project as well as an equitable sharing of the burdens and benefits. The second principle, called the affirmative principle, simply acknowledges everyone’s right to energy by stating that “if any of the basic goods to which every person is justly entitled can only be secured by means of energy services, then in that case there is also a derivative right to the energy service.”⁵⁶ In order to achieve these two principles, we need the theory around energy justice and just transition that I detail below, as an approach to climate policy solely focused on economics or science will fail.⁵⁷

Energy justice is defined by the Energy Justice Workbook as the “goal of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic, and health burdens on marginalized communities.”⁵⁸ Energy justice sits beside environmental and climate justice, with a particular focus on energy production and provision.⁵⁹ An energy justice framework requires a shift of power where frontline communities are given control, analysis is performed on who these systems benefit and exploit, and past harm to specific groups is recognized and corrected.⁶⁰ Building on the work of environmental justice and climate justice advocates and scholars, the concept of energy justice gained popularity in the 2010s as a way of viewing how energy is produced and distributed.⁶¹ Within this time, many

⁵⁵ Jones, Sovacool, and Sidortsov, “The Ethical and Philosophical Case,” 162.

⁵⁶ Jones, Sovacool, and Sidortsov, “The Ethical and Philosophical Case,” 165.

⁵⁷ Raya Salter, Carmen G. Gonzalez, and Elizabeth Ann Kronk Warner, *Energy Justice: US and International Perspectives* (Northampton Massachusetts: Edward Elgar Publishing, 2018).

⁵⁸ Shalanda Baker, Subin DeVar, and Shiva Prakash, “The Energy Justice Workbook” (Initiative for Energy Justice, December 2019), <https://iejusa.org/wp-content/uploads/2019/12/The-Energy-Justice-Workbook-2019-web.pdf>.

⁵⁹ Baker, DeVar, and Prakash, “The Energy Justice Workbook,” 5.

⁶⁰ Shalanda H. Baker, “Fighting for a Just Transition: Climate Change Mitigation Does Not Guarantee Social Justice. To Avoid Deepening Inequalities, Clean Energy Transitions Must Prioritize Communities over Profit.: NACLA Report on the Americas: Vol 52, No 2,” *NACLA Report on the Americas* 52, no. 2 (June 9, 2020): 144–51, <https://doi.org/10.1080/10714839.2020.1768732>.

⁶¹ Baker, DeVar, and Prakash, “The Energy Justice Workbook,” 8.

scholars and activists have formed definitions and categories of energy justice, two of which I will discuss below.

The first, defined by Sovacool et al., divides energy justice into eight core principles: availability, sustainability, affordability, due process, transparency and accountability, intragenerational equity, intergenerational equity, and responsibility.⁶² These principles are subdivided into those that are the most impact focused (availability, affordability, intra-generational equity), those more process focused (transparency and accountability, due process), future oriented (sustainability, intergenerational equity), and responsibility is globally oriented, connecting any individual project to the global struggle for environmental justice.⁶³ These principles connect closely to the second and arguably the more common energy justice framework.

The second group of scholars divides energy justice into two main prongs: procedural and distributive justice.⁶⁴ Similarly to transparency, accountability, and due process, procedural justice refers to the process in which policy and programs are created and whose opinions are valued.⁶⁵ Like the impact-focused principles in the previous format, distributive justice refers to the equitable impact of that policy or program. However, *recognition justice* has also been added to specifically highlight the history of environmental injustice and to work toward a future that seeks to rectify those wrongs.⁶⁶ This will be relevant in Riverside where a large percentage of the population lives in disadvantaged communities according to the CalEnviroScreen. Lastly,

⁶² Benjamin K. Sovacool et al., "Energy Decisions Reframed as Justice and Ethical Concerns," *Nat Energy* 1, no. 16024 (2016), <https://doi.org/10.1038/nenergy.2016.24>.

⁶³ Sovacool et al., "Energy Decisions."

⁶⁴ Raya Salter, Carmen G. Gonzalez, and Elizabeth Ann Kronk Warner, *Energy Justice: US and International Perspectives* (Northampton Massachusetts: Edward Elgar Publishing, 2018).

⁶⁵ Benjamin K. Sovacool et al., "Decarbonization and Its Discontents: A Critical Energy Justice Perspective on Four Low-Carbon Transitions," *Climatic Change* 155, no. 4 (August 2019): 581–619, <https://doi.org/10.1007/s10584-019-02521-7>.

⁶⁶ Baker, "Fighting for a Just Transition," 149.

McCauley et al. offers cosmopolitan justice as a fourth element of energy justice, which specifically highlights externalities that often go unrecognized in energy policy.⁶⁷ In an article that examines what can go wrong in climate policy from an energy justice framework, Sovacool et al. found that communities beyond the obvious location of the policy were being impacted in connection with the creation or waste produced by new energy technologies.⁶⁸ This is an example of cosmopolitan justice, which highlights the principles of justice and equity that apply to everyone collectively, and are not divided by ethnicity, borders, or any other construction. The article, “Energy justice in the transition to low carbon energy systems” critiques other energy justice scholarship for being specifically western and human-focused, and failing to acknowledge the impacts of these energy-producing endeavours on the global south and non-human beings.⁶⁹

This perspective connects to Healy et al.’s work in embodied energy justice, which emphasizes the impacts of energy production and processes on distant places and communities. The impacts of energy production are often though not always global in scale but are ignored by governments and agencies. The authors argue that embodied justice impacts must be assessed for all major projects.⁷⁰ On a more local level, it is crucial to analyze the spatial implications of energy decisions in order to identify the specific communities and places that are most impacted

⁶⁷ Darren McCauley et al., “Advancing Energy Justice: The Triumvirate of Tenets,” *International Energy Law Review* 32, no. 3 (January 1, 2013): 107–16, https://www.researchgate.net/profile/Kirsten-Jenkins/publication/259459020_Advancing_Energy_Justice_The_triumvirate_of_tenets/links/5583e35f08ae89172b86158a/Advancing-Energy-Justice-The-triumvirate-of-tenets.pdf.

⁶⁸ Benjamin K. Sovacool et al., “Decarbonization and Its Discontents: A Critical Energy Justice Perspective on Four Low-Carbon Transitions,” *Climatic Change* 155, no. 4 (August 2019): 581–619, <https://doi.org/10.1007/s10584-019-02521-7>.

⁶⁹ Darren McCauley et al., “Energy Justice in the Transition to Low Carbon Energy Systems: Exploring Key Themes in Interdisciplinary Research,” *Applied Energy* 233–234 (January 2019): 916–21, <https://doi.org/10.1016/j.apenergy.2018.10.005>.

⁷⁰ N Healy, J Stephens, and Stephanie A. Malin, “Embodied Energy Injustices: Unveiling and Politicizing the Transboundary Harms of Fossil Fuel Extractivism and Fossil Fuel Supply Chains,” *Energy Research and Social Science* 48 (February 2019): 219–34, <https://doi.org/10.1016/j.erss.2018.09.016>.

for policy.⁷¹ In recognizing the geographic components of poverty, environmental justice, and culture, we can create policy with impacts that are fairly and equitably distributed.⁷²

While energy justice theory is still fairly new, it is becoming a crucial part of policy-making and planning. This theory grounds my project with electrification policy, as I incorporated this theoretical framework into the policy-making process. I particularly focused on achieving procedural justice, as my project involves the community engagement process to create this policy. In order to achieve distributive, cosmopolitan, and recognition justice, we must create a community engagement strategy that ensures procedural justice first.

Just Transition

*Transition is inevitable. Justice is not.*⁷³

In order to achieve energy justice, it is crucial to ensure that the process is rooted in justice and power transfer. The framing of a just transition, born out of labor and environmental movements, has recently gained coverage in scholarship. In the 1990s, a collaboration between communities most impacted by those industries and workers in those industries formed the foundation of the just transition movement.⁷⁴ Defined by the Just Transition Alliance, a just transition is the equitable process centering frontline communities and workers to achieve a sound economy and environment.⁷⁵ This includes rebuilding a locally oriented economy, and shifting power so that communities control decision making.⁷⁶ A just transition is intersectional.

⁷¹ Stefan Bouzarovski and Neil Simcock, "Spatializing Energy Justice," *Energy Policy* 107 (April 8, 2017): 640–48, <https://doi.org/10.1016/j.enpol.2017.03.064>.

⁷² Bouzarovski and Simcock, "Spatializing Energy Justice," 645.

⁷³ "Just Transition: A Framework for Change," Climate Justice Alliance, accessed January 10, 2021, <https://climatejusticealliance.org/just-transition/>.

⁷⁴ Michelle Mascarenhas-Swan, "The Case for a Just Transition," in *Energy Democracy*, ed. Denise Fairchild and Al Weinrub (Washington, DC: Island Press/Center for Resource Economics, 2017), 37–56, https://doi.org/10.5822/978-1-61091-852-7_3.

⁷⁵ "What Is Just Transition?" (Just Transition Alliance), accessed March 1, 2021, <https://climatejusticealliance.org/wp-content/uploads/2018/06/Just-Transition-Alliance-Just-Transition-Principles.pdf>.

⁷⁶ "What Is Just Transition?" 1.

It is not a simple solution and it is not solely replacing energy sources, but transforming the economy and the way our society functions.⁷⁷ The organizers at the Climate Justice Alliance have created a framework for just transition containing eight principles: Buen Vivir, Meaningful Work, Self Determination, Resources and Power, Regenerative Ecological Economies, Culture and Tradition, Local, Regional, National, and International Solidarity, and What we Need Now.⁷⁸ Similar to the principles of energy justice, these focus on creating sustainable and thriving communities for all people, but coming from the activist lens, they have a stronger focus on the communities and workers who will be impacted.

The Climate Justice Alliance also introduces the themes of work, culture and tradition which all play an important role in energy policy but aren't at the forefront of many of these conversations. The Climate Justice Alliance offers a warning of "false solutions" which, similar to greenwashing, pretend to offer environmental solutions while actually replicating the harm already caused by polluting industries. Examples of false solutions are: continuing to prioritize business and profit through a market based approach to decarbonization, "cleaner" forms of energy (including nuclear) that continue to harm environmental justice communities, and isolating carbon emissions as the sole element of the climate crisis.⁷⁹ These false solutions often come up in the political sphere where climate change has been acknowledged as a problem but solutions sit within the existing neoliberal economic framework. As the Just Transition Alliance argues, "the government holds that the urgency of the climate crisis justifies the means of a green transition, regardless of whose rights are sacrificed in the process."⁸⁰ Clean energy projects can just as easily fall into the trap of privatization, profit, and negatively impacting marginalized

⁷⁷ Mascarenhas-Swan, "The Case for a Just Transition," 40.

⁷⁸ "Justice Transition Principles" (Climate Justice Alliance), accessed February 15, 2021, https://climatejusticealliance.org/wp-content/uploads/2019/11/CJA_JustTransition_highres.pdf, 4-5.

⁷⁹ "Justice Transition Principles," 6.

⁸⁰ "What Is Just Transition?" 1.

communities. It is the process itself that the just transition framework focuses on, shifting the economy away from polluting industries while focusing on creating new opportunities for workers. This entails redefining the purpose of the economy from making the wealthy wealthier by any means necessary to meeting the needs of communities in the present and future.⁸¹ While corporations and business interests like to scare the public into thinking that climate-friendly policies will eliminate jobs, “there is no contradiction among simultaneously creating sustainable development, having a healthy economy and maintaining a clean and safe environment.”⁸²

The literature on just transition and the advocacy work that is being done in this realm has framed how I view electrification policy. While it can easily be seen as a technological solution that could create many of the same inequities as natural gas, through meaningful participation it is possible to create a just transition to electric new construction.

Community Participation

*No decisions about us without us.*⁸³

The literature about community participation in policy-making and planning provides a stronger and more nuanced understanding of what “meaningful participation” means. The flagship work on this topic is Sherry R. Arnstein’s “A ladder of participation,” although published in 1969, remains a central text for understanding public participation. Arnstein’s ladder contains eight steps, categorized into non-participation, degrees of tokenism, and degrees of power.⁸⁴ On the lowest rung is manipulation, in which agencies engineer support, intended to uplift the program or policy rather than get any input at all. The highest rung is citizen control where citizens are entirely in charge of a program. Describing the ladder, Arnstein says that

⁸¹ Mascarenhas-Swan, “The Case for a Just Transition,” 46.

⁸² “What Is Just Transition?” 1.

⁸³ Mascarenhas-Swan, “The Case for a Just Transition,” 44.

⁸⁴ Sherry R. Arnstein, “A Ladder of Citizen Participation,” *Journal of the American Planning Association* 85, no. 1 (January 2, 2019): 24–34, <https://doi.org/10.1080/01944363.2018.1559388>.

“when the have-nots define participation as redistribution of power, the American consensus on the fundamental principle explodes into many shades of outright racial, ethnic, ideological, and political opposition.”⁸⁵ This is partly why so often public participation lives on those bottom rungs. Governments are used to holding public meetings, sending out surveys, and generally “educating” the community about policy, but very rarely is there room for actual participation and a power transfer to those most impacted. This is the very dynamic I intend to avoid when coordinating community outreach in Riverside. Arnstein acknowledges that that ladder is an oversimplification but it is a powerful tool nonetheless to reveal the failures of the status quo and what passes for participation.⁸⁶

Building on the original ladder of participation is the International Association of Public Participation’s *Spectrum of Participation* (figure 4). Updated in 2018, the spectrum is used internationally amongst governing bodies and organizations to understand and plan their participation strategies. The five categories in the spectrum are: inform, consult, involve, collaborate, and empower.⁸⁷ This is the structure I used in my meeting with Caleb Ragan when coming up with an organizational outreach plan for the city. We agreed that the categories of “involve” and “collaborate” would be the goal for our process. It would be impossible within the confines of the task to achieve “empower” because the decision to pass this type of policy had already been decided without citizen involvement, but the goal of collaborating with communities through local organizations was achievable. Within the “involve” and “collaborate” categories, we would be able to form partnerships with local organizations and promise to actually incorporate their feedback and concerns into the policy.

⁸⁵ Arnstein, “Citizen Participation,” 24.

⁸⁶ Arnstein, “Citizen Participation,” 26.

⁸⁷ “IAP2 Spectrum of Public Participation” (International Association for Public Participation, 2018), https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print.pdf.

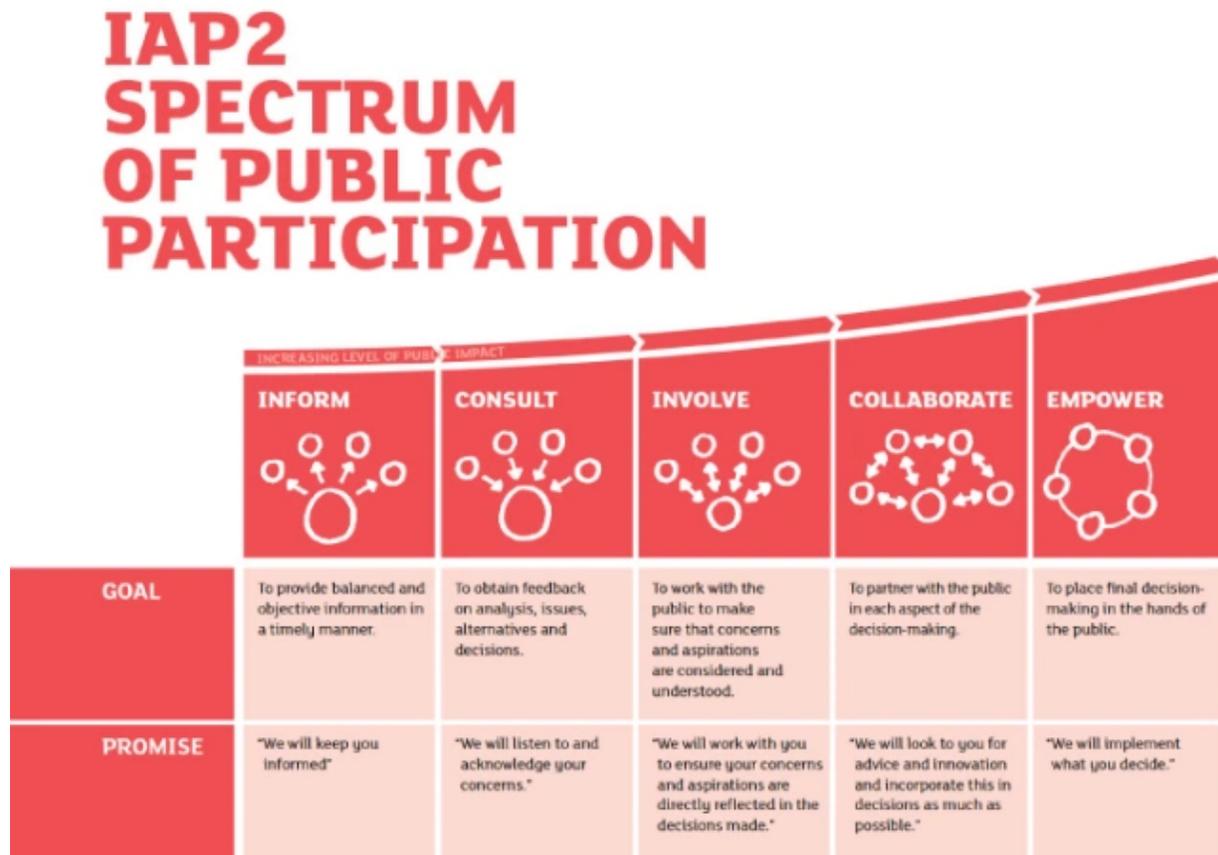


Figure 4. Spectrum of Public Participation created by the International Association of Public Participation.

Application to Riverside

I detailed three main categories of work that connect to building electrification policy: energy justice, just transition, and participatory planning. Energy justice, in acknowledging and correcting past injustices and creating a process that empowers frontline communities, is the basis of my work on electrification policy in Riverside. It is necessary in order to ensure a future in which energy is produced and distributed in an equitable and healthy manner for all people and the environment. Just transition literature grounded my work specifically in trying to shift away from technical solutions to justice-based solutions. This requires a very different approach

to “community participation” than is often used by governments. I specifically used the IAP2 *Spectrum of Participation* (figure 4) when working with the city in order to define where this policy-making process will sit and what steps we needed to take to ensure a meaningful participatory process. A concern I do have about the categories farther along on the spectrum concerns the labor contributed by communities and organizations, which becomes exploitive without compensation. Similarly, what happens when particular people and communities simply do not have the bandwidth to take on this kind of effort? These are questions that I continued to engage with throughout this process.

Analyzing the Process behind Riverside’s Electrification Policy

As is common in the political arena, the community outreach and policy creation process did not go as anticipated. With the initial timeline suggesting a presentation to the city council of the policy for approval in May of 2021, that deadline quickly extended to December. Though the city’s motivation to make impactful climate policy as soon as possible initially resulted in an ambitious timeline, it became clear that it would be impossible to coordinate with the numerous stakeholders and achieve any meaningful public participation in only a few months. The new timeline provides the summer and early fall as an opportunity to engage with the public, workshop different parts of the policy with relevant stakeholders, and coordinate between different departments in the city on what building electrification will look like in Riverside. As the timeline for the policy-making process changed, so did my role. I set up initial meetings with many organizations between January and March, and created an engagement plan for the city for the summer months.⁸⁸ This will incorporate town hall meetings, specific stakeholder engagement workshops, and the creation of an advisory committee with a diverse array of experiences and

⁸⁸ See Appendix 2

investment in the policy. First I will detail the challenges the city faces in incorporating substantive community input. I found an absence of trust and relationships between the city and community groups, the convoluted and confusing nature of electrification policy, and the pandemic to all be major roadblocks in effective community engagement. Next, I will highlight the different definitions of “outreach” in Riverside, and how the government seeks to engage different groups with specific goals. Finally, I will describe my experience with the process so far, the deliverables I created and the impact I was able to have.

Lack of robust community organizing in Riverside

As mentioned previously, my original intent was to reach out to environmental justice organizations, social justice advocates, and other community groups, but I quickly found that there were not many in the area, and practically none specific to the city of Riverside. This is a major difference from doing this kind of work in other California cities. In San Francisco, the city initiated a multi-year long process that engaged hundreds of community organizations, but both the timeline and scale of community engagement in Riverside is much smaller. The actual number of organizations is smaller in Riverside, but there is also essentially no existing relationship with the city government and these organizations, and very little trust built between the communities impacted by this policy and the government instituting it. These are problems that will not vanish overnight, but I still viewed this policy as an opportunity to begin the process of building trust and creating those relationships, which will hopefully lead to more inclusion on future policies as well.

Additionally, there has been a lot of upheaval recently with the Center for Community Action and Environmental Justice (CCA EJ), the main environmental justice group in the Inland Empire. Because of the conflict and change in leadership, the organization was not in the best

place to be prepared to take on this policy and work with the city. A new group was born out of the turmoil, called the People's Collective for Environmental Justice (PCEJ). I had an initial meeting with them in March in which they expressed interest in being involved in the policy, and expressed concerns over the impact of electrification on housing affordability, utility costs, and the accessibility of community engagement strategies. Both CCAEJ and PCEJ have expressed interest in being involved. However, because relationships are fraught between the two organizations, meeting with them simultaneously will not be possible. This means that my plan to have meetings with specific stakeholder groups became complicated, as the different environmental justice organizations will not want to be together. Similarly, I intend to suggest the placement of one of these groups on the advisory committee, but both would be impossible.

Because of the very small number of active organizations, I ended up having meetings with organizations that weren't connected to the local community, or that didn't support electrification even when the mission of their organization (e.g. public health, environment, etc.) led me to assume they would. For example, halfway through a meeting with a regional public health organization, it became clear that the leadership did not support electrification even considering the substantive public health benefits, and had a more conservative ideology regarding climate policy than I had expected. At the same time, the organization had very little connection to actual communities in Riverside suffering from the negative public health impacts of climate change and natural gas in the home. This was a humbling experience, as I realized it was naive to assume that because an organization's mission hypothetically aligns with the policy, that I should expect blanket support.

By contrast, the Sierra Club was enthusiastic about the policy and ready to step in to support our work. We met with representatives of the My Generation campaign in a meeting with

the Councilmember and I also met them individually to specifically speak about incorporating community engagement in the process. They have extensive experience engaging with cities on building electrification policy, and were knowledgeable both about the specifics of the policy itself as well as the best strategies for overcoming opposition and passing the legislation. They have offered to support the policy-writing process, provided resources and information that can be shared with the community, will reach out to their members to support building electrification in Riverside, and will attend/co-host town hall meetings to provide support and additional information to community members. Because of the large and established nature of the organization and their experience with building electrification and political advocacy, the Sierra Club is able to support our work in Riverside more than local organizations that simply don't have the bandwidth and are not prioritizing electrification at this time. Because of this, they will be a key resource in the coming months as the city looks to incorporate environmental justice principles into its policy.

The Pandemic

Initiating this process during the coronavirus pandemic posed a major challenge. With all remote activities, individuals who lack internet access are inherently excluded from any community engagement effort. This is a roadblock for the 15% of Riverside households who lack internet access,⁸⁹ particularly since the citywide free wifi program was terminated in 2014. An all online format also posed a problem for outreach. What would in any other year have been visiting community centers, churches, knocking on doors, and showing up at the offices of local organizations suddenly became badgering people over email and the phone. Fortunately, an extended process will allow for socially distanced in-person opportunities for engagement over

⁸⁹ "Internet Connection Data for Cities," *Governing: The Future of States and Localities*, accessed April 19, 2021, <https://www.governing.com/archive/city-internet-connection-household-adoption-rates-data.html>.

the summer and fall, expanding accessibility and allowing the city to connect with more people and organizations. Nevertheless, with organizations and communities most impacted by environmental injustice, people's bandwidth is already limited. Add to that a global pandemic and some specific government policy is not a top priority.

Funding

It became clear when researching electrification frameworks and the best practices of other cities that those who were the most successful invested substantial time and funds in the community engagement process. This presented a roadblock in Riverside, where enthusiasm about climate policy does not transfer to any financial commitment to making the process equitable. In speaking with Caleb Ragan, he made it clear that the city does not intend to provide financing for the policy-making process, which makes undertaking all the more difficult. Because of the immense labor it would involve to have community organizations take the lead on the engagement process, as several of the frameworks suggest, it is important to compensate people for their time. Without that option, I attempted to off-load as much of the labor as possible on to the city while still allowing for significant input from community organizations. I also devised a strategy to take advantage of organizations that do have the expertise and resources to invest in the policy, like the Sierra Club, who will be involved as a stakeholder and also help prepare materials and lead town hall meetings.

Electrification is Complicated

A challenge that I ran into immediately when engaging with the topic of building electrification is the level of complexity and technical jargon, making it inaccessible to almost everyone. I myself struggled to understand what electrification means and still do after months of research and meetings. Politicians and environmental organizations were also often unclear about

the specifics, making it difficult to have meaningful conversations about concerns and benefits. This challenge is particularly magnified with the general public, most of whom have never heard of electrification. Without awareness of the environmental or public health impacts of natural gas, the topic seems dull or irrelevant to the daily lives of people.

In response to the complexity, I thought it was crucial to have a pamphlet about building electrification that very clearly and briefly outlines the benefits of a natural-gas free home. The Sierra Club recommended focusing on the public health element, as it appeals to communities universally, where the environmental angle is more niche to people who are invested in ending climate change. This pamphlet was created by the city with information from my research and the Sierra Club, and will be distributed electronically through the networks of our partner organizations, and offered at town halls and community workshops. It will also be translated into Spanish, in order to increase accessibility to the large spanish speaking population in Riverside.

The Timeline

Something that initially concerned me about the process of creating a building electrification policy in Riverside was the short timeline. I was brought on in the ideation phase of the project in November, with the intention of having a policy up for approval by city council in May. This tight of a timeline would have made a meaningful community engagement strategy incredibly difficult. Nevertheless we began the process and with that deadline in mind I wrote my original organizational outreach plan. This plan included identifying active organizations in Riverside in the following categories: housing, low-income support, environmental justice, labor, universities, public health, development, and business. Caleb and I reached out to leadership at these organizations and coordinated individual meetings in order to introduce the concept of a building electrification policy and the potential overlap between the city's goals and the

organization's. I also took these meetings as an opportunity to look for in-roads into communities for future engagement. This proved harder than expected as many of the organizations we met with worked on these issues on a larger scale, either throughout the Inland Empire or all of Southern California, and did not have strong ties to communities specifically in the city of Riverside. Reaching out to these larger organizations was necessary because there were not many organizations doing environmental, labor, and housing advocacy local to Riverside.

Through this process I more thoroughly understood that there is no one solution to building electrification just as there is no one framework that will result in meaningful public participation. The strategies that worked in San Francisco or Berkeley will not necessarily translate to the Inland Empire, where the political climate and organizing environment are very different, and local organizations are not jumping at the opportunity to be involved in this policy. This does not mean that engagement is not possible here in Riverside, the avenues are simply different and the process of trust building must start from the beginning. An extended timeline will provide more opportunities to work with different communities and organizations in various formats including: town hall meetings open to all Riverside community members, specific stakeholder engagement sessions, and the creation of an advisory committee of stakeholders that will meet with the Councilmember and strategize around different aspects of the policy.

Analyzing Different Forms of Outreach

When I took on the role as the Community Engagement and Outreach Fellow at the City of Riverside, and in conducting research on a just transition and community participation, I developed a very specific idea of what outreach means. I was focusing on hard-to-reach communities, people who had historically been left out of decision making and would be most impacted by the economic and health effects of this policy. My goal was to develop strategies to

reach those communities, and nurture partnerships where their experiences and concerns would directly impact the direction of the policy. Throughout the four-month process of working with city officials on building electrification, I quickly learned that the local government had defined outreach differently. I identified three categories of outreach from the perspective of local government in Riverside, each with its own goals and particular stakeholders: building support, avoiding opposition, and educating the public.

Building support, especially in a *purple city*, as local officials characterize Riverside, is a top priority. Councilmember Fierro intends on getting 100% support from the city council upon introduction of this legislation. In order to do this, he must build a coalition of people and organizations who are promoting this policy. Being one of the first cities in Southern California to explore this, and a local government which until recently was not interested in environmental legislation, a building electrification policy is a risk that could pay off highly with enough support. For this reason, much of the city's outreach was focused on cultivating this support, approaching the city's most influential organizations and individuals, selling them on the concept, and inviting them to write letters, show up at public meetings, and reach out to their connections to build enthusiasm for the policy. This also connects to the specific choice of the city to pursue a reach code rather than a natural gas ban, in an attempt to put a positive spin on the ordinance rather than infringing on people's right to use natural gas in the home. Finally, the building electrification policy is a significant step in Riverside's goal to use ambitious environmental policy to market itself as a sustainable city and draw more businesses and jobs. This is the angle from which the city approached the opposition.

Equally prioritized by Riverside city government is avoiding and appeasing potential opposition. Anticipated detractors of this policy were mostly business interests, from major

employers, developers, restaurants, and Southern California Gas Co., the provider of natural gas for the city. In order to avoid any uproar in response to the announcement of this policy, the city engaged in a balancing act of approaching and warning stakeholders that this policy would be happening, making them feel included in the process, and also avoiding giving ammunition to those who might take a strong stand against the policy in public meetings or the press. For example, SoCalGas has a history of fighting electrification in California, from encouraging workers to protest at public meetings in San Luis Obispo,⁹⁰ to financing a lawsuit by the California Restaurant Association in Berkeley.⁹¹ Riverside doesn't expect such severe opposition here but is trying to neutralize it with a swell of support from other sources. Other opposition, including businesses and developers, the city is hoping to placate through engagement, placing the Chamber of Commerce and the Rain Cross Group on an advisory committee and letting their voices be heard, without allowing them to steamroll the policy itself. Councilmember Fierro's office is not anticipating much opposition within local government, primarily due to the progressive city council and the fact that Riverside owns its own public electric utility which will stand to benefit from a ban on natural gas. Similarly, they have an established and positive relationship with local labor organizations, and though the pipe-fitters union will obviously not be in support of electrification, they believe that labor as a whole will be supportive or at the very worst indifferent. Each sector of opposition requires its own engagement strategy, and the city seems well-versed in handling these different groups.

⁹⁰ Nick Wilson, "SLO Council Passes Policy to Make New Buildings All-Electric — but Gas Is Still an Option," San Luis Obispo Tribune, September 3, 2019, <https://www.sanluisobispo.com/news/local/environment/article234680472.html>.

⁹¹ Emilie Raguso, "California Restaurant Association Sues Berkeley over Natural Gas Ban," *Berkeleyside* (blog), November 23, 2019, <https://www.berkeleyside.org/2019/11/22/california-restaurant-association-sues-berkeley-over-natural-gas-ban>.

Finally, the third category of engagement is interacting with the general public. Usually this step happens after a policy draft is created, but I am trying to incorporate it into every step of the process. My goal when joining this effort as the Community Engagement and Outreach Fellow was to create avenues for actual engagement, giving people the opportunity to voice their concerns, and share their experiences so that the policy can reflect the needs of the larger Riverside community. However, this is a goal that is rarely achieved in reality. While the Councilmember's office was receptive to this idea and supported my efforts to create opportunities for engagement, I was also confronted with an underlying message of "education." Whenever discussing interfacing with citizens of Riverside, the language usually surrounded the theme of educating the public and making people understand the benefits of electrification. This can even be seen in the policy memo itself.⁹² While this is an important step, especially given the convoluted nature of electrification policy, I was concerned that the engagement would stop there, and not recognize that understanding the lived experiences of Riverside residents is a valuable addition to the policy making process. For this reason, I included specific language about a just transition and meaningful community engagement in the Riverside Community Engagement Plan.⁹³ The town hall meetings will not only serve as a chance to explain what electrification is, but also a way for city officials to engage in conversations about how it will impact people's lives and what specific considerations should be taken when crafting the language and elements of the policy itself.

Process and Impact

Before the project timeline was extended six months, I was pessimistic about the possibility of having a strong engagement component, given the obstacles the city was facing

⁹² See Appendix 3

⁹³ See Appendix 2

like the lack of trust with the community and the pandemic. Nevertheless, using the Emerald City Collaborative’s toolkit as a guide, I researched and created a community map (figure 5), categorizing main interest groups we would want to build relationships with, and identifying specific organizations to reach out to.



Figure 5: Community Engagement Map (2020) produced by author.

Alongside the map, I came up with an initial plan that would allow for some community engagement before a draft of the policy was due in March, and then a month of more substantive engagement and meetings before submitting the final policy. Fortunately, my concerns about the feasibility of such a quick timeline were alleviated when the project was extended, and I was able to continue my initial meetings with organizations for another month. I used the content of

these meetings to influence my edits and additions to the policy memo,⁹⁴ and had written specific language about a just transition and a meaningful community engagement strategy.

Unfortunately, due to bureaucracy and time constraints, my edits did not make it into that memo. However, some of the just transition language did as well as the content of the meetings I organized.

Additionally, I wrote a second community engagement plan,⁹⁵ this time intended for the extended timeline. Building off of the work of the three frameworks on equity in building electrification, I came up with a strategy that would attempt to include important stakeholders in every step of the process. The introduction highlights the importance of ensuring a just transition through a rigorous engagement process and a shift of power to impacted communities. It outlined some of the key stakeholders: labor, low income communities and communities of color, public health groups, environmental justice advocates, business, and housing. Next, the goals of this process are specified, including forming trust and building relationships with local organizations, incorporating the concerns of frontline communities, increasing the understanding amongst the public of what electrification means and its impacts, and building support for the policy before it is up for vote by city council.

I then shared some best practices from other cities in California that are already working on electrification policies. The places I highlighted were San Jose, the San Joaquin Valley, Oakland, Berkeley, and San Francisco. All of these examples included substantial involvement and buy-in from community organizations, who often took the leadership role in organizing engagement opportunities, and were instrumental in ensuring that equity remained central to the process.

⁹⁴ See Appendix 3

⁹⁵ See Appendix 2

After the initial meetings organized with community groups, organizations, and businesses that informed the policy memo itself, the city will bring the policy structure and outline to the community in the form of three main components: an advisory committee, individual stakeholder workshops, and public town hall meetings. The advisory committee will include a balance of groups that traditionally hold power like business interests and representatives of marginalized communities, labor, and environmental justice interests. This is essential to ensure that all parties are included in the process, but no one group is given the power to weaken the policy. They will meet periodically with city officials and discuss progress on the policy and particular concerns.

Stakeholder engagement sessions will allow for a more detailed analysis of the particular concerns of a given group. For example, a special meeting will be held with restaurant owners where natural gas in cooking is discussed; low income communities and organizations can get more detail about impacts on utility cost, gentrification, and displacement; environmental justice organizations can delve into the environmental and public health impacts; developers and contractors can learn more about construction and installation cost; and labor groups can establish the need for quality jobs and training programs.

Town Halls will provide a space for residents and community members to have their voices heard about the policy and how it will impact them. Co-led and advertised by community partners, these sessions will avoid an “education” model to engagement and instead facilitate conversation about what building electrification is and how it can be implemented in the most equitable manner. These meetings will incorporate a brief presentation with our partners at the Sierra Club about electrification, break-out rooms with community members and policy makers to allow for conversation, and a question and answer opportunity. To increase the accessibility of

these town halls, they will be held both online and in-person as restrictions in California lift. They will be held at different times to ensure anyone interested is able to attend, and they will be delivered in both English and Spanish. Similar meetings will take place after a draft of the reach code is written. This will allow for multiple opportunities for engagement rather than a comment period after the policy has been written.

In one section, I emphasize the importance of ensuring accountability, and using the community engagement strategies above to actually impact the final version of the policy in a way that reflects the interests and concerns of communities present. Recognizing that many groups have been excluded historically from the policy-making process and taking real steps toward correcting this injustice will result in a better more equitable policy and a just transition to all-electric buildings that benefits everyone. In order to encourage follow-through on this plan, I outlined several metrics with which to measure engagement, which originated in the Zero Cities Project's Equity Assessment Tool. The metrics included were: early engagement, demographics of engaged communities, and budget allocation.⁹⁶ By tracking when and how often engagement opportunities take place, who is being included in the process, and how they are being compensated, it will be easier to assess the success of this strategy.

Though meaningful community buy-in is impossible to quantify, these metrics will serve as accountability for a local government which could very easily slip back into a pattern of decision-making without participation from impacted communities. While the execution of this plan faces obstacles including finding organizations to partner with in Riverside, the extended timeline of the process through the fall alleviates my initial concern about timing and will allow for a much more substantive undertaking.

⁹⁶ Race Forward, "Equity Assessment Tool" (Zero Cities Project, 2018), https://www.usdn.org/uploads/cms/documents/equity_assessment_tool_-zero_cities_project_-_race_forward_2019.pdf, 24.

Conclusion

The effort to promote a just transition and engage the community in building electrification in Riverside has faced a number of challenges. As with any controversial policy, the city is trying to balance building support, handling opposition, and creating opportunities for meaningful engagement. Simultaneously, it was forced to confront what community engagement looks like during a global pandemic, how to gather community input on a subject that is so confusing and dry, and how to reach out to people without existing relationships with community organizations. While the outreach effort has not gone perfectly, and is by no means complete, the city is prioritizing building a just transition away from natural gas and incorporating community input in a substantive way. The power has not shifted to communities to self-determine this policy, but organizations were incorporated into the process before a policy was written, and a community engagement process this summer, as outlined in the Riverside Community Engagement Plan,⁹⁷ will incorporate the feedback of stakeholders and community members before and during the creation of the policy itself. Grounded in the literature on energy justice, just transition, and community engagement, this process should result in a policy that is responsive to the needs of the city, and will center environmental justice. This is the only way to achieve an electrification policy that can truly combat the environmental and social justice impacts of climate change, and build climate resilience in the community.

The question remains whether Riverside is truly going to be capable of the kind of community outreach process that is necessary to create an equitable policy. However, if the city does commit to the plan, this engagement could have the ability to impact the city's relationship with marginalized communities beyond this policy, and develop strategies to incorporate hard-to-reach communities for all policy-making. If done right, this policy and process has the

⁹⁷ See Appendix 2

opportunity to change how Riverside relates to its constituents, and serve as an example for cities around the Inland Empire which are looking to incorporate building electrification into their climate resilience plans in an equitable and restorative way. These efforts are critical to produce policy that is responsive to community needs, acknowledges past injustices, and works to build a just transition for all.

Appendix 1: Community Engagement Map

Community Engagement Map



Appendix 2: Riverside's Community Engagement Plan for Building Electrification

Riverside's Community Engagement Plan for Building Electrification

Introduction

As the city seeks to fight climate change by mandating electrification for new construction, it is important to ensure that there is a just transition, defined by the Just Transition Alliance as the equitable process of centering frontline communities and workers to achieve a healthy economy and environment. This includes giving most-impacted communities power in the policy-making process, ensuring that the policy positively impacts job growth and housing affordability rather than contributing to job loss and gentrification, and improves the public health for environmental justice communities. In order to achieve this, the city will undergo an extensive and meaningful public participation process that will engage the numerous stakeholders impacted by this shift away from natural gas, including: labor, low income communities and communities of color, public health groups, environmental justice advocates, business, and housing.

Goals of outreach

1. Gain insight into concerns and thoughts from the Riverside community, especially those most impacted by this policy including low income people and people of color
2. Building trust with communities that have not historically been listened to or considered
3. Forming partnerships with organizations connected to social and environmental justice in Riverside
4. Increase understanding of what building electrification means and its benefits/risks
5. Building support for this policy in preparation for potential opposition

Learning from Other Cities

Over 40 cities in California have passed some kind of building electrification ordinance or reach code. Some of these cities have undergone extensive community engagement processes and developed strategies to work with local communities to design a policy that will benefit everyone. By learning from these cities, Riverside can adapt some of these proven strategies in its own process.

- San Jose worked with the Building Electrification Institute to develop a co-creation process, hiring two community-based partner organizations to lead an outreach effort. San Jose also created an induction cooktop check-out program, allowing residents to test out and learn more about induction cooking for free for two weeks.
- The San Joaquin Valley introduced a pilot-program, organized by a team of three community organizations, that worked with 11 specific areas and adopted a community-led decision making process toward electrification. This included workshops

scheduled around residents' working hours, during which the communities could voice their concerns and make specific demands for affordability, reliability, and co-benefits.

- Oakland and Berkeley held workshops with market-rate and affordable housing developers to explain electrification impacts and ensure that the policy would not impact housing affordability.
- San Francisco engaged in an extensive community engagement process involving over 250 community-based organizations, that was led by Emerald Cities San Francisco (ECSF) and People Organizing to Demand Environmental and Economic Rights (PODER). The Zero Emission Building Task Force was made up of four different sub-groups focusing on existing vs. new construction, and commercial, residential, and municipal buildings.

Target groups for partnership

- Labor
- Low income Communities and Communities of Color
- Public Health
- Environmental Justice
- Universities

Methods

Advisory Committee

- This group should balance potential opposition and groups that have traditionally held power like business interests and other groups and representatives of marginalized communities, labor, and environmental justice interests
- This group will meet periodically with city officials and discuss progress on the policy and particular concerns
- Included in these discussions also will be community feedback from stakeholder engagement sessions and town halls

Stakeholder Engagement Sessions

- Meetings with a specific set of stakeholders, facilitated by community partners
- Allow more detail on particular concerns of the group: e.g. Restaurants (cooking), Low Income (utility cost, gentrification, displacement), Environmental Justice (environmental impact), Labor (jobs, training programs), etc.
- These meetings will collect multiple groups and individuals within a certain subset to discuss the particular concerns of that group

Town Halls

- Reach out to community partners to encourage community members to come
- Bring partners at the Sierra Club and elsewhere to collaborate and explain electrification/field questions

- These meetings will incorporate a presentation about the policy, what building electrification is, and how it may impact residents' lives
- To ensure increased accessibility, town halls should offer a mix of in-person and online meetings as covid restrictions lift, and should be held both inside and outside of normal business hours
- There should also be translators present and the opportunity for language justice
- Shift from solely “education” to an opportunity for community members to voice their concerns. This will entail incorporating opportunities for conversation between residents and city officials/partner organizations rather than a traditional presentation and comment period
- This can include a question and answer portion, as well as break out groups which will allow time to address people’s concerns, and a return to the main group to discuss takeaways and next steps

Pamphlet

- English and Spanish explaining the basics of electrification
- This pamphlet will outline the environmental, public health, and economic benefits of electrification, and explain a very complex topic in a clear and concise way
- Can be shared electronically through the city website, newspapers/newsletters, and through community partners. Also in public spaces and community centers as restrictions lift over the summer

Timeline

- **April 22, 2021 (today):** A presentation on an amendment to the Building Code and California Building Code (via a Reach Code) to establish all-electric requirements for new construction and provide direction regarding possible pathways for implementation.
- **April – September 2021:** Implement discovery, outreach, public education, and stakeholder engagement efforts, such as:
 - Formation of an informal standing Advisory Committee made up of a diverse array of community stakeholders with the goal of informing the policy development process. The informal group will meet monthly throughout the development of the ordinance and provide input on potential mitigation strategies.
 - Two monthly town hall meetings, one online and one in person, with community members to ensure that all members of the public have the opportunity to voice their concerns and better understand the educate the public on the benefits and co-benefits of the transition to all-electric building. The insights from these meetings will directly impact the policy language to reflect the concerns of our community.
 - Biweekly stakeholder-specific meetings will allow each interest group two opportunities to address their specific considerations before the policy draft is finalized.

Ensuring Accountability

The most important element of these community engagement tactics is that they be substantive, honest, and that the information gathered is scrutinized carefully and actually incorporated into the final policy. These are not opportunities for the city to let people speak and say that they have engaged with x number of people, but an actual chance to make a policy that will positively impact all Riverside residents and begin to correct historical environmental and economic inequalities in the city. It is important to recognize that these groups have historically not been included in the policy-making process and to take real steps toward correcting that.

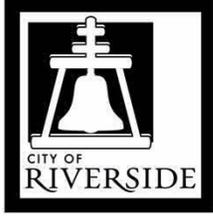
Policy-making that does not include those most vulnerable will produce solutions that are inherently inequitable, while a process that does transfer power to impacted communities will result in a policy that benefits all.

Metrics

The Zero Cities Project defined three metrics for defining effective community engagement:

1. Early Engagement: the earlier communities are incorporated into the policy-making process, the more likely the final policy will respond to community concerns. With initial meetings with organizations held before the policy memo was written, Riverside is on the right path to ensuring community engagement at every step of the process.
2. Demographics of engaged communities: Tracking demographic information of folks present at meetings and workshops will show whether the city is successfully reaching out to often marginalized communities.
3. Budget allocation to the engagement process: As was evident with other cities' best practices defined above, meaningful engagement requires a substantial investment of labor from partner organizations and community members. Expecting this level of involvement without payment recreates exploitative relationships and should be avoided. Therefore, allocating funds for community engagement is essential to ensure the process is equitable and thorough.

Appendix 3: Riverside's Building Electrification Policy Memo



City of Arts & Innovation

Economic Development, Placemaking and Branding/Marketing Committee

TO: ECONOMIC DEVELOPMENT, PLACEMAKING AND BRANDING/MARKETING COMMITTEE MEMBERS **DATE: APRIL 22, 2021**

FROM: CHAIR RONALDO FIERRO **WARDS: ALL**

SUBJECT: REACHING CARBON-NEUTRALITY BY 2040: ELECTRIFICATION OF THE BUILT ENVIRONMENT VIA REACH CODE AND STRENGTHENING OF ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

ISSUE: Development of a comprehensive electrification ordinance that requires (by 2023) all new construction of three stories or less to be all electric, that strengthens Electric Vehicle (EV) charging infrastructure, and that proactively addresses and promotes housing development affordability and a just transition towards “high-road” green jobs.

RECOMMENDATIONS:

That the Economic Development, Placemaking and Branding/Marketing Committee:

1. Direct staff to move forward with the discovery phase of a building decarbonization “reach code” amending Chapter 16 of the Riverside Municipal Code (Building Code) and California Building Standards Code and potential amendments to Chapter 19 (Zoning Code) that include:
 - a. an all-electric mandate for all new construction in low-rise buildings of three stories or less in city limits with an effective implementation date of January 1st, 2023; and
 - b. Incentives, programs, and potential requirements for electric vehicle (EV) capable charging spaces for multi-unit residential developments and non-residential developments; and

2. Discuss and provide input on the formation and membership of an Ad-Hoc Decarbonization Technical Advisory Committee to gain input and industry advice from the development community, organized labor, advocacy groups and other pertinent stakeholders on building decarbonization efforts; and
3. Discuss and provide input on potential community engagement strategies, including surveys, webinars and public workshops for residents, disadvantaged communities and the development and housing community.

BACKGROUND:

In 2020, the Riverside City Council adopted the **2025 City Council Strategic Plan** delineating bold climate goals, including an ambitious goal of achieving citywide carbon neutrality no later than 2040 – five years ahead of the Statewide mandate.

This would be no small feat. The scale of this challenge will require an all-hands approach and an inclusive process that engages, involves, and consults all community stakeholders, including the business community, developers, the building industry, major employers, organized labor, environmental justice organizations, disadvantaged communities and our youth.

The need for immediate climate action is clear. It is exemplified in the risks already impacting our community’s public health and safety, and our life-sustaining ecosystems—including rising temperatures and more extreme heat waves, drier landscapes and more intense droughts, increased risk of floods, and more frequent and larger wildfires.

The Intergovernmental Panel on Climate Change (IPCC) has made it abundantly clear that to avoid the worst impacts of climate change, we must act to dramatically reduce our carbon emissions and prevent global warming from exceeding 1.5 degrees Celsius.⁹⁸ To achieve this, global carbon emissions by 2030 will need to be nearly halved, with full decarbonization by 2050.

California has a long-standing commitment to reducing greenhouse gases (GHGs) and combating climate change. The state’s original climate change mitigation goals aimed to reduce emissions to 1990 levels by 2020 and reduce GHGs by 80 percent below 1990 levels by 2050. A decade later, Governor Edmund G. Brown Jr. set a 2030 climate target for the state when he signed Senate Bill SB 32 in 2016, requiring the state to reduce GHGs 40 percent below 1990 levels. In 2018, Governor Brown called for the state to achieve carbon neutrality by no later than 2045.

⁹⁸ Intergovernmental Panel on Climate Change; “Special Report on Global Warming”

In addition, California’s energy and climate policies have extended beyond emissions targets. SB 100 requires the state to achieve a 60 percent Renewables Portfolio Standard (RPS) by 2030 and meet 100 percent of retail sales from zero-carbon electricity by 2045. Complementary to electric sector decarbonization goals are mandates and targets aimed at increasing the share of zero-emission vehicles on California roads. The state’s energy transition also extends to the built environment. AB 3232 authored by Assemblywoman Friedman in 2018 requires the California Energy Commission to examine strategies to reduce emissions from buildings 40 percent below 1990 levels by 2030.

A key strategy to achieve decarbonization is through building electrification.

What is Building Electrification? The term “building electrification” refers to the process of phasing out gas infrastructure utilized for cooking and heating in buildings – which are powered by fossil fuels – and instead transitioning to the use of electricity – mainly powered by solar, wind and other sources of zero-carbon electricity.

While buildings today rely on a variety of different fuels, fossil fuels such as natural gas and propane are used to power furnaces, boilers, and water heaters. In the kitchen, fossil fuels are used to power stovetops and ovens. According to the Environmental and Energy Study Institute, residential and commercial buildings account for 40% of carbon emissions nationwide.⁹⁹ Gas appliances are responsible for over 50 million tons of GHG emissions annually.

According to the 2016 Riverside Economic Prosperity Action Plan and Climate Action Plan, residential and commercial/industrial emissions account for 54% of total baseline emissions from 2007.¹⁰⁰ In order to make a significant dent in our carbon emissions and keep global warming below 1.5° degrees Celsius – proactive action is needed to transition the construction of new buildings away from fossil fuels. Without electrifying buildings and generating that electricity from renewable sources, neither California nor Riverside will reach its climate goal of being carbon neutral before 2045. Embracing electrification will allow us to make serious headway on these imperative climate goals.

As of the publication of this report on April 7, 2021, 42 different local governments in California have adopted building code amendments to reduce reliance on gas infrastructure and decarbonize buildings. This list includes Oakland, San Jose, Santa Cruz, San Francisco, and Sacramento. If adopted, Riverside would be one of the first Southern California jurisdictions to do so, outside of San Luis Obispo and Santa Barbara.

DISCUSSION:

The City of Riverside is currently the 12th largest City in California and the County seat

⁹⁹ Environmental and Energy Study Institute; “Buildings and Built Infrastructure”

¹⁰⁰ City of Riverside, “Riverside Economic Prosperity Action Plan and Climate Action Plan”

to the third most populous County in California. There is a real opportunity for Riverside to lead the rest of the region, state, and nation in implementing pragmatic and sensible climate policy. In addition, this type of climate leadership will further efforts to leverage and establish a new green economy dynamic with Riverside at the forefront of green tech and climate innovation.

When the City Council adopted the Riverside 2025 Strategic Plan, the document included a clear commitment to taking bold action to achieve carbon neutrality by 2040 and to be a leading regional voice in efforts to reduce GHG emissions and “*Champion proactive and equitable climate solutions based in science to ensure clean air, safe water, a vibrant natural world and a resilient green new economy for current and future generations.*”

Decarbonization through electrification is a key strategy to reducing GHG emissions and is a “least-regret” logical first step in making a meaningful dent in citywide carbon emissions. In addition, passing a local ordinance will help build momentum for the California Energy Commission and the US Energy Department to pass statewide and national building efficiency standards.

Successfully decarbonizing buildings will require a multipronged approach with varied strategies and phasing for existing buildings and new construction. Buildings are long-term assets; and as such, the continued construction of gas-powered buildings essentially locks in an energy system infrastructure for multiple decades. Every new building built in Riverside is an opportunity for us to invest in a carbon-free future and enhance positive outcomes for future generations.

Advances in electric heat pumps and other electrical equipment are yielding much higher overall efficiencies than their natural gas counterparts. Electric heat pumps, unlike traditional electric resistance heaters, do not generate heat, but concentrate and transfer it for end uses such as space conditioning/heating and water heating. This process uses less primary energy and emits much less carbon, particularly when it is powered by renewable energy. Induction cooktops are also gaining popularity and are significantly more efficient than gas stoves.

Ultimately, coupling code enhancements for new buildings with existing and future efforts to undertake energy efficiency measures in existing buildings, develop new funding mechanisms, and building energy resilience systems, such as locally constructed microgrids, will prove an effective strategy in mitigating the climate impact of our local building stock.

Cost-Effectiveness and Other Co-Benefits/Policy Considerations:

All-Electric buildings have been proven to be cost-effective for new construction for nearly all building types since most electric appliances have similar or lower operating costs compared to natural gas appliances. However, the alternative of retrofitting can require significant and costly upfront investments. Given this reality, early

implementation of building electrification will provide cost-savings to developers, builders and eventual tenants and homeowners in the long run. An earlier effective date will also avoid the construction of “stranded assets” (obsolete gas infrastructure) that will eventually require retrofitting once federal and state mandates go into effect.

According to an Energy and Environmental Economics report commissioned by the California Energy Commission, building electrification is a lower-cost, lower-risk and longer-term strategy in comparison to “renewable natural gas” (RNG; biomethane, hydrogen and synthetic natural gas, methane produced by combining hydrogen and carbon).¹⁰¹

While natural gas currently plays an integral role in California’s energy grid (80% of all California homes are connected to the natural gas grid) – consumer behavior is shifting as customers wean off of gas usage and federal and state climate mandates come into play, causing large reductions in gas demand across the State of California over the next 10 years. Over time, as costs become reliant on a decreased ratepayer base, unsustainable increases in gas rates will become inevitable. Without policy intervention, a small share of ratepayers, mainly low-income residents, and renters, will be forced to bear the brunt of increased gas costs. The E3 report found that given this risk, early implementation of building electrification mandates can serve as a risk-reduction strategy to protect vulnerable communities from increased energy costs.

In addition to the emission impacts of transitioning away from gas to electrification, research has shown significant public health benefits to the transition to electrification. According to a UCLA Fielding School of Public Health Report titled, “Effects of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California,” replacing all of California’s gas appliances with electric appliances would prevent 900 cases of respiratory illnesses, lower health care costs by \$3.5 billion and save 350 lives every year. These co-benefits make building electrification a highly compelling strategy for emissions reductions, especially compared with alternatives that rely on higher levels of combustion.¹⁰²

According to the study, cooking with gas appliances for over an hour can cause carbon monoxide and nitrogen dioxide levels to increase above the acute national and state-based ambient air quality thresholds in over 90% of scenarios modeled by the research team. It was also found that those concentrations are the highest for those that live in apartments due to the smaller space of the residency. A 2013 study in the International Journal of Epidemiology showed that living in a home with gas cooking increased children’s chance of having asthma by 42%. This presents additional risks for renters, many who are low-income, and again shows how environmental justice communities are disproportionately affected by the negative impacts of gas infrastructure.

¹⁰¹ Energy and Environmental Economics Report; “The Challenge of Retail Gas in California’s Low Carbon Future”

¹⁰² UCLA Fielding School of Public Health; “Effects of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California”

Ensuring a Just Transition to High-Road Jobs: Riversiders should not have to choose between economic prosperity and protecting our environment. Inland working families are struggling on both fronts – from economic and job insecurity due to the pandemic to asthma and polluted neighborhoods because of worsening impacts of climate change. As this Committee considers phasing out gas infrastructure as a critical climate change action item, it is important for the Committee to ensure that there is a just transition and comprehensive mitigation efforts taken to ensure that local jobs are retained in clean energy and sustainability-focused job fields.

A UCLA Luskin Center for Innovation Report about building decarbonization workforce needs and recommendations found that electrifying 100% of California’s existing and new buildings by 2045 would create over 100,000 full-time equivalent jobs, even after accounting for losses in the fossil fuel industry.¹⁰³ In order to ensure this type of outcome, the report recommended that policymakers engage fully with affected unions to grow high-road jobs and minimize job losses; prioritize demand-side strategies; and target investments in supply-side strategies, such as workforce training.

This point is accentuated in a recent report from the California Workforce Development Board, saying: *“deliberate policy interventions are necessary in order to advance job quality and social equity as California transitions to a carbon-neutral economy, just as such efforts are required to reduce pollution, protect human and environmental health, and safeguard communities from an already changing climate.”*¹⁰⁴

Deliberately supporting high-road jobs (defined as high-paying job opportunities associated with a carbon-free economy) as a municipal organization and utility agency will ensure that the benefits of low-carbon policies are broadly shared among the community. This is in line with the City Council’s Economic Prosperity Strategic Goal and Riverside’s larger goal of being an international hub for clean and green economic industry.

Formation of Technical Advisory Committee: While building decarbonization is an essential policy action to realize the city’s goal of reaching carbon-zero by 2040, it will require developers, builders, businesses and laborers in Riverside to pivot current practices and phase out from gas infrastructure. Because of this, it is important that these stakeholders are included in the process of developing this policy from the beginning stages.

This advisory group will meet throughout the next 5 months to develop an innovative building decarbonization policy that addresses the critical need for immediate climate action, keeps housing and development costs low, and transitions the local economy towards a net benefit of high-paying green jobs.

¹⁰³ UCLA Luskin Center for Innovation; “California Building Decarbonization: Workforce Needs and Recommendations”

¹⁰⁴ California Workforce Development Board; “Putting California on the High Road: A Jobs and Climate Action Plan for 2030”

Project Timeline: Given these policy considerations and the desire to ensure that stakeholder concerns are heard, mitigated and fully apart of the discussion of transitioning to building electrification, the Chair has put forth the project timeline for committee review:

- **April 22, 2021 (today):** Receive a presentation on supporting the City’s goal of reaching carbon-neutrality by 2040 through an amendment to the Building Code and California Building Code (via a Reach Code) to establish all-electric requirements for new construction and provide direction regarding possible pathways for implementation.
- **April – September 2021:** Implement discovery, outreach, public education, and stakeholder engagement efforts, such as:
 - Formation of an informal standing Technical Advisory Committee made up of a diverse array of community stakeholders with the goal of informing the policy development process. The informal group will meet throughout the development of the ordinance and provide input on potential mitigation strategies.
 - Holding webinars, public meetings, and committee workshops to educate the public on the benefits and co-benefits of the transition to all-electric buildings.
- **October 2021:** Return ordinance framework to the committee for discussion and recommend forwarding to the City Council, Board of Public Utilities and potentially the Planning Commission.
- **November:** Board of Public Utilities and Planning Commission to hold meetings review the electrification ordinance framework and make recommendations to the City Council.
- **December 2021:** City Council to hold public hearing on electrification ordinance with recommendation for approval and forwarding of the reach code to the California Energy Commission.
- **January/February 2021:** California Energy Commission to post the reach code and accept comments for 60 days. At the regularly scheduled meeting closest to the end of the public comment period, the Commission will consider the adoption of the reach code.

FISCAL IMPACT:

There is no fiscal impact associated with the recommendations in this report. If new programs or policies are recommended and implemented, the fiscal impact, if any, will

be defined during City Council review and approval of this item.

Prepared by: Caleb Ragan, Office of Councilmember Ronaldo Fierro

Bibliography

- American Lung Association. "California: Riverside," 2019.
[/research/sota/city-rankings/states/california/riverside](https://research/sota/city-rankings/states/california/riverside).
- Arnstein, Sherry R. "A Ladder of Citizen Participation." *Journal of the American Planning Association* 85, no. 1 (January 2, 2019): 24–34.
<https://doi.org/10.1080/01944363.2018.1559388>.
- Baker, Shalanda H. "Fighting for a Just Transition: Climate Change Mitigation Does Not Guarantee Social Justice. To Avoid Deepening Inequalities, Clean Energy Transitions Must Prioritize Communities over Profit.: NACLA Report on the Americas: Vol 52, No 2." *NACLA Report on the Americas* 52, no. 2 (June 9, 2020): 144–51.
<https://doi.org/10.1080/10714839.2020.1768732>.
- Baker, Shalanda, Subin DeVar, and Shiva Prakash. "The Energy Justice Workbook." Initiative for Energy Justice, December 2019.
<https://iejusa.org/wp-content/uploads/2019/12/The-Energy-Justice-Workbook-2019-web.pdf>.
- Bouzarovski, Stefan, and Neil Simcock. "Spatializing Energy Justice." *Energy Policy* 107 (April 8, 2017): 640–48. <https://doi.org/10.1016/j.enpol.2017.03.064>.
- "CalEnviroScreen 3.0." OEHHA, June 2018.
<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>.
- California EPA. "SB 535 Disadvantaged Communities," June 2018.
<https://oehha.maps.arcgis.com/apps/View/index.html?appid=c3e4e4e1d115468390cf61d9db83efc4>.
- "Climate Equity & Community Engagement in Building Electrification: A Toolkit." Emerald Cities Collaborative and PODER, 2020.
https://nmcdn.io/e186d21f8c7946a19faed23c3da2f0da/9bb11a106d6f43d5ae8118a05a071e96/files/resources/Climate-Equity-and-Community-Engagement-Toolkit_Nov102020.pdf.

Climate Justice Alliance. “Just Transition: A Framework for Change.” Accessed January 10, 2021. <https://climatejusticealliance.org/just-transition/>.

“Equitable Building Electrification: A Framework for Powering Resilient Communities.” Oakland, California: Greenlining, 2019. https://greenlining.org/wp-content/uploads/2019/10/Greenlining_EquitableElectrification_Report_2019_WEB.pdf.

Frontier Energy, Inc., and Misti Bruceri & Associates, LLC. “2019 Cost-Effectiveness Study: Low-Rise Residential New Construction.” California Energy Codes & Standards, August 1, 2019. <file:///Users/emma/Downloads/2019%20Res%20NC%20Cost-eff%20Report.pdf>.

Gough, Matthew. “California’s Cities Lead the Way to a Gas-Free Future | Sierra Club.” Sierra Club, January 25, 2021. <https://www.sierraclub.org/articles/2021/01/californias-cities-lead-way-gas-free-future>.

Governing: The Future of States and Localities. “Internet Connection Data for Cities.” Accessed April 19, 2021. <https://www.governing.com/archive/city-internet-connection-household-adoption-rates-data.html>.

Healy, N, J Stephens, and Stephanie A. Malin. “Embodied Energy Injustices: Unveiling and Politicizing the Transboundary Harms of Fossil Fuel Extractivism and Fossil Fuel Supply Chains.” *Energy Research and Social Science* 48 (February 2019): 219–34. <https://doi.org/10.1016/j.erss.2018.09.016>.

“IAP2 Spectrum of Public Participation.” International Association for Public Participation, 2018. https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print.pdf.

Tabuchi, Hiroko. “Halting the Vast Release of Methane Is Critical for Climate, U.N. Says.” *The*

New York Times, April 24, 2021, sec. Climate.

<https://www.nytimes.com/2021/04/24/climate/methane-leaks-united-nations.html>.

“The Impact of Fossil Fuels in Buildings.” Rocky Mountain Institute, 2019.

<https://rmi.org/insight/the-impact-of-fossil-fuels-in-buildings/>.

Jones, Benjamin R., Benjamin K. Sovacool, and Roman V. Sidortsov. “Making the Ethical and Philosophical Case for ‘Energy Justice.’” *Environmental Ethics* 37, no. 2 (2015): 145–68.

<https://doi.org/10.5840/enviroethics201537215>.

“Justice Transition Principles.” Climate Justice Alliance. Accessed February 15, 2021.

https://climatejusticealliance.org/wp-content/uploads/2019/11/CJA_JustTransition_highres.pdf.

Logue, Jennifer M., Neil E. Klepeis, Agnes B. Lobscheid, and Brett C. Singer. “Pollutant Exposures from Natural Gas Cooking Burners: A Simulation-Based Assessment for Southern California.” *Environmental Health Perspectives* 122, no. 1 (January 1, 2014):

43–50. <https://doi.org/10.1289/ehp.1306673>.

Mahone, Amber, Charles Li, and Zack Subin. “Residential Building Electrification in California.” San Francisco: Energy and Environmental Economics, Inc., April 2019.

https://www.ethree.com/wp-content/uploads/2019/04/E3_Residential_Building_Electrification_in_California_April_2019.pdf.

Mascarenhas-Swan, Michelle. “The Case for a Just Transition.” In *Energy Democracy*, edited by Denise Fairchild and Al Weinrub, 37–56. Washington, DC: Island Press/Center for

Resource Economics, 2017. https://doi.org/10.5822/978-1-61091-852-7_3.

McCauley, Darren, Vasna Ramasar, Raphael J. Heffron, Benjamin K. Sovacool, Desta Mebratu, and Luis Mundaca. “Energy Justice in the Transition to Low Carbon Energy Systems: Exploring Key Themes in Interdisciplinary Research.” *Applied Energy* 233–234 (January 2019): 916–21. <https://doi.org/10.1016/j.apenergy.2018.10.005>.

McKenna, Claire, Amar Shah, and Leah Louis-Prescott. “All-Electric New Homes: A Win for

- the Climate and the Economy.” Rocky Mountain Institute, October 15, 2020.
<https://rmi.org/all-electric-new-homes-a-win-for-the-climate-and-the-economy/>.
- Newell, Peter, and Dustin Mulvaney. “The Political Economy of the ‘Just Transition’: The Political Economy of the ‘Just Transition.’” *The Geographical Journal* 179, no. 2 (June 2013): 132–40. <https://doi.org/10.1111/geoj.12008>.
- “Priority Population Maps.” California Air Resources Board, June 2018.
<https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm>.
- Race Forward. “Equity Assessment Tool.” Zero Cities Project, 2018.
https://www.usdn.org/uploads/cms/documents/equity_assessment_tool_-zero_cities_project_-_race_forward_2019.pdf.
- Raguso, Emilie. “California Restaurant Association Sues Berkeley over Natural Gas Ban.” *Berkeleyside*, November 23, 2019.
<https://www.berkeleyside.org/2019/11/22/california-restaurant-association-sues-berkeley-over-natural-gas-ban>.
- Salter, Raya, Carmen G. Gonzalez, and Elizabeth Ann Kronk Warner. *Energy Justice: US and International Perspectives*. Northampton, MA: Edward Elgar Publishing, 2018.
- Seals, Brady, and Andee Krasner. “Gas Stoves: Health and Air Quality Impacts and Solutions.” Rocky Mountain Institute, 2020. <https://rmi.org/insight/gas-stoves-pollution-health/>.
- Shiva, Vandana. *Earth Democracy*. 2nd ed. Berkeley, California: North Atlantic Books, 2015.
- Sovacool, Benjamin K., Mari Martiskainen, Andrew Hook, and Lucy Baker. “Decarbonization and Its Discontents: A Critical Energy Justice Perspective on Four Low-Carbon Transitions.” *Climatic Change* 155, no. 4 (August 2019): 581–619.
<https://doi.org/10.1007/s10584-019-02521-7>.
- Tabuchi, Hiroko. “Halting the Vast Release of Methane Is Critical for Climate, U.N. Says.” *The New York Times*, April 24, 2021, sec. Climate.
<https://www.nytimes.com/2021/04/24/climate/methane-leaks-united-nations.html>.

“The Building Electrification Equity Project.” Emerald Cities Collaborative, April 2020.

https://nmcldn.io/e186d21f8c7946a19faed23c3da2f0da/9bb11a106d6f43d5ae8118a05a071e96/files/BEE_Report_Final.pdf.

“What Is Just Transition?” Just Transition Alliance. Accessed March 1, 2021.

<https://climatejusticealliance.org/wp-content/uploads/2018/06/Just-Transition-Alliance-Just-Transition-Principles.pdf>.

Wilson, Nick. “SLO Council Passes Policy to Make New Buildings All-Electric — but Gas Is Still an Option.” San Luis Obispo Tribune, September 3, 2019.

<https://www.sanluisobispo.com/news/local/environment/article234680472.html>.

Zhou, Shan, and Douglas S. Noonan. “Justice Implications of Clean Energy Policies and Programs in the United States: A Theoretical and Empirical Exploration.” *Sustainability* 11, no. 807 (February 3, 2019). <https://doi.org/doi:10.3390/su11030807>.