Climate Governance City to City:

Case Studies of the Sierra Club Ready for 100 Network

by

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Abstract

According to the Intergovernmental Panel on Climate Change (IPCC), even if net atmospheric warming is limited to 1.5℃, threats like extreme precipitation, biodiversity loss, sea level rise, and many other risks pose a serious hazard to the planet. Within the context of inadequate ambition on the international scale and nationally in the U.S., attention towards action on the local scale has grown over the past two decades. In terms of urban context, there is a need for more scholarship which incorporates a larger number of case studies and which addresses smaller cities in addition to the broad theme of justice. Here, I utilize a medium-n case study including cities of a range of sizes across the U.S. which have been recognized by the Sierra Club's Ready for 100 (RF100) campaign: Athens, GA; Chicago, IL; Columbus, OH; La Mesa, CA; Madison, WI; and Sarasota, FL. RF100 is an initiative aimed at increasing the use of renewable energy across the country while simultaneously promoting equity and justice. Using questionnaires and semi-structured interviews of organizers and officials, I find broad thematic patterns in the challenges and driving factors that campaigns face. When it comes to justice, while the national team engages thoroughly with this complex concept and its various facets, some localities are more successful in this regard than others, as they are more comprehensive and incorporate more of the components of justice identified here through prior research. The hope is that the barriers and drivers identified here, as well as the strengths and shortcomings in certain cities regarding the incorporation of justice elements, can inform both future research and climate governance efforts.

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Introduction

Climate change is one of the direst challenges facing our world today. Sea level rise, droughts, and biodiversity loss are some of the impacts that a changing climate will bring to the planet (IPCC 2018). The extent of these consequences depends on the actions taken today, yet national and global policies and practices remain inadequate (Streck et al. 2020). Stalemate has led to stagnation and insufficiently ambitious commitments and agreements on the international stage (Hoffman 2011, 15; Bulkeley 2013, 6; Streck et al. 2010). Nonetheless, even as some nations falter, local and regional actors have taken on a greater role in climate mitigation and adaptation. In the U.S., some of these localities have been acknowledged by the Sierra Club's Ready for 100 (RF100) network, a national initiative dedicated to recognizing, supporting, and facilitating municipal and regional work towards transitions to one hundred percent renewable energy. This paper presents a case study of six cities of a range of sizes included in the network, thereby addressing a lack of medium-n studies and small cities within urban climate governance research (van der Heijden 2019). Furthermore, it analyzes how justice is conceptualized and promoted in each local context in order to augment research that specifically links justice issues and climate action to the urban level.

RF100 not only recognizes states, counties, districts, territories, and municipalities across the country that have passed commitments to 100% renewable energy; it also forms a network amongst localities to facilitate lesson-learning and support. The network hosts national calls for advocates to join and learn from one another and has published an "activist toolkit" online with guidance for how to launch a local campaign. Importantly, not every local commitment that is recognized by the national network is a result of a local RF100 campaign specifically, and the Sierra Club may not even be involved locally at all. The extent of the RF100 network's

involvement may simply be recognition of the commitment. Various policy instruments can be recognized, including climate action plans, municipal aggregation, and non-binding resolutions.

Of central concern for analysis of this case study is that of governance, defined as "processes through which collective goals are defined and pursued in which the state (or government) is not necessarily the only or most important actor" (Bulkeley and Betsill 2006, 144). Urban climate governance, specifically, can be characterized as "the ways in which public, private, and civil society actors and institutions articulate climate goals, exercise influence and authority, and manage urban climate planning and implementation processes" (van der Heijden et al. 2018, 366-367). In other words, climate governance is about expanding the focus beyond government alone and understanding how a variety of stakeholders influence the policy-making process. In this vein, this study takes a holistic approach to analyzing and understanding policy efforts taking place in localities recognized by RF100, as these often involve the work of both city government officials and civil sector advocates. For example, in Chicago, civil actors played a central role in crafting the resolution that was ultimately passed by City Council in 2019.

Given the rise of subnational climate action, research addressing urban climate governance has grown quite significantly in the last two decades (van der Heijden et al. 2018). However, there is a need for greater scholarship on governance in the Global South as well as smaller cities in the Global North, and the majority of empirical urban governance papers have utilized single-n and small-n (2 to 5 cases) studies (van der Heijden 2019). Furthermore, in addition to validating and further expanding the list of "enabling factors" that help facilitate climate governance, there is an opportunity to analyze how these are interconnected and interact in different local contexts (Ibid., 7). It has also been noted that national networks are understudied (Fuhr et al. 2018).

Equity and justice have long been tied to environmental issues. Environmental, climate, and energy justice are all fields of activism and scholarship which address a wide range of social concerns such as the inequitable distribution of environmental ills. However, it has been recognized that justice as it relates to urban climate governance specifically has not been adequately studied (Hughes and Hoffman 2020).

This paper seeks to address several of the gaps outlined above by using a medium-n (6 to 30 cases) study of six cities of varying sizes included in the Sierra Club's Ready for 100 network in the U.S. This research aims to expand and provide further support for challenges and "drivers," or factors that help facilitate progress, identified thus far in the literature (van der Heijden 2019, Bulkeley 2013, Chu et al. 2018, Hölscher 2019). Given the importance of justice when it comes to climate action, it also analyzes how the national network as well as local actors have incorporated justice concerns into their efforts. While it is limited to the United States, this research enriches the existing literature by including more case studies, smaller cities, studying a national network, and analyzing justice concerns. It endeavors to provide insights as other cities across the U.S. and the world pursue transitions to renewable energy.

Summary of main research questions:

1. What challenges have cities recognized by RF100 faced in getting their commitments and policies passed?
2. What factors have helped to facilitate the passage of these same commitments and policies?
3. How have the cities promoted conceptions of justice and equity while addressing inequity? How do these efforts reflect established theoretical principles of justice?

In order to answer these lines of inquiry, this study draws on resolutions, reports, and other policy documents in addition to data collected from semi-structured interviews with organizers, activists, and government officials involved in Ready for 100 campaigns. It utilizes both inductive and deductive coding methods to identify "barriers and drivers" for successful climate governance in the cities studied (Bulkeley 2013, 133-134). It also draws upon concepts and frameworks such as distributive, procedural, recognition, and restorative justice identified in the literature to analyze the broad concept of justice as it relates to climate mitigation efforts within these cities and the national network's platform.

Ultimately, prominent challenges from the case studies included in this research were financial concerns, issues with collaboration and cohesion, difficulty with engagement and inclusion, the entrenchment of infrastructural energy systems and processes, and issues pertaining to discussions with decision-makers. Common driving factors included a favorable political and legal context, network membership, and inclusion/collaboration. Finally, when it comes to justice and equity, findings demonstrated that not every city engaged equally with the theoretical components of justice included in this study: distributional, procedural, recognition, restorative. The national network incorporates justice concerns quite extensively, yet there was significant variation city to city. Chicago's resolution was most thorough when it comes to justice considerations, followed by Athens and Sarasota. Columbus and Madison both addressed distributional concerns, while La Mesa did not substantively engage with justice issues and instead delayed that engagement to a future plan. While there are many definitions of justice, it is crucial that city policy-makers engage with this concept as thoroughly and inclusively as possible.

Brief History of Urban Climate Action

Without ambitious, far-reaching cuts to global fossil fuel emissions, climate change will bring disastrous impacts for human and non-human life. Even if net warming is restricted to 1.5˚C, sea level rise, extreme precipitation events, drought, biodiversity loss, and a host of other risks threaten the global community (IPCC 2018). Despite the fact that nations have been negotiating for years to establish adequate commitments and mitigation and adaptation plans, progress is still insufficient. According to the UN, if the world follows the current Paris Accord commitments, the world can expect a temperature increase of 3.2 degrees Celsius, which would result in devastating repercussions for the planet. To limit warming to 1.5 degrees, global emissions will need to decline by 7.6% annually through 2030; yet, if the world follows commitments in place now, emissions in 2030 will be two times greater than the emissions level that is needed to limit warming sufficiently (UN Environment Programme 2019).

Last year's United Nations Framework Convention on Climate Change (UNFCCC) negotiations in Madrid have been widely criticized for failing to achieve sufficient progress; failure to enhance ambition is one of the central issues at hand (Streck et al. 2020). However, despite this political stalemate at the international level, local and regional actors are pushing forward with mitigation and adaptation work of their own. In the words of Hoffman (2011), "the range of activities seeking to fill the void of a breakdown in the multilateral treaty-making process is wide" (17). Much attention has been paid to cities and their role in curbing emissions. Urban areas account for approximately two-thirds of all greenhouse gases emissions globally (Wolfram et al. 2019, 1). Continued urbanization only magnifies the need for climate initiatives at the city level (UN DESA 2018).

Cities have been important players in climate governance for decades. In 1992, the UN Conference on Environment and Development acknowledged their role in global efforts, and the ICLEI Urban CO2 Project - the first international network of cities working towards climate governance - was established. Over time, more cities have become involved, and the engagement and ambition of urban actors have increased. For instance, 18 cities contributed to the Urban CO2 Project in the 1990s, and in 2016 while over 500 reported to the CDP that they were engaged in climate governance (Gordon 2018, 3). Some cities have also transitioned to what has been called "strategic urbanism" which means that "rather than being only a marginal concern in a few municipalities... for at least some cities, climate change now a strategic concern and one which is more closely aligned to the concerns of urban growth and resource security that dominate urban agendas" (Bulkeley et al. 2012). In other words, in these cases climate change responses are designated as central components of urban planning. Furthermore, initiatives like the Carbon Neutral Cities Alliance and the C40 network's commitment to emissions reductions in line with the 1.5˚ climate target show that many urban actors have heightened the ambition of their efforts. These developments demonstrate that "cities have shifted from requesting inclusion from the sidelines to asserting a position of *leadership* at the center of the global response" (ibid., 4).

Urban Climate Governance Scholarship

The urban climate governance literature is expansive and has grown significantly over the years. As noted above, urban governance deals with how actors beyond the public sector alone interact with local government and exert influence on the policy-making process. Bulkeley and Schroeder (2011) argue that the roles and responsibilities of state and non-state actors are not

concretely delineated, but are instead created through the process of governing, itself: "rather than operating at a fixed boundary between state and non-state actors, the forging of consensus critically depends both on the crossing, reconfiguring and maintaining of boundaries between state/non-state arenas. These boundaries are a result of the work of governing, and subject to contestation and change." (762). However, the authors address the concept of authority in governance via the public/private dichotomy, a confusing distinction since their case studies of London and Los Angeles involve non-profit actors, not just private sector entities. While the relationship between the public and private sector has often been a major focus in urban governance scholarship, the role of the civic sector is important in both of these spheres for environmental governance at large (Foo 2018). Authority then, may best be described along the lines of the "three pillars of governance: the public, private, and civic sectors" (ibid., 68). According to Chu et al. (2018), "an increasing recognition of the importance of non-state actors—including NGOs, businesses, and academics—and of the multiple agencies with a stake in climate action has precipitated the development of more complex engagement strategies that bridge institutions and foster wider consensus" (129-130). Non-state actors can help support governance where capacity may be lacking, though how these actors contribute to mitigation goals specifically is not completely understood (Broto 2017). Ultimately, however, research shows that the nature of governance is dependent on socio-economic and political context. (Hölscher et al. 2019).

The Sierra Club's Ready for 100 campaign provides an interesting lens for urban climate governance analysis given its status as a distributed network; while it connects groups and individuals across the country who are advocating for renewable energy commitments, it does not exert a heavy top-down influence. While it provides resources and guidance, local campaigns

are not conducted in a uniform manner, and some are not closely connected to the Sierra Club prior to recognition by the network.

Challenges, Drivers, Multilevel Governance

A number of challenges and opportunities for the governance process have been identified (Bulkeley 2013, Chu et al. 2018, Hölscher 2019). Table 2 (see Appendix) combines and consolidates challenges identified by each of the three works with those identified in interviews from this study. The major categories, which are drawn from the literature, include institutional, political, sociotechnical, spatial/scalar, and equity/justice.

In terms of drivers, in a recent literature review of 260 publications, van der Heijden (2019) enumerates eight "enabling factors" which can help propel climate action at the urban level:

- A favorable political and legal context
- Autonomy
- Funding
- Coordination across vertical levels of government
- Interdepartmental coordination
- Network membership
- Stakeholder inclusion and collaboration
- The work of a "local climate champion" (2019, 5)

When it comes to network membership, or being part of "capacity-building and learning networks," van der Heijden appears to focus on how city governments, themselves, and officials network with other local governments to pursue climate goals, a process which differs from how

the RF100 network operates, as the latter entails close connections among civil society actors as opposed to formal local government decision-makers (2019, 5).

Another important theme in the literature concerns the importance of context, both political and legal (Chu et al 2018, Rocher 2017, Hölscher et al. 2019, Rochracher and Späth 2014, McKendry 2016). In the words of Rocher (2017), "characterising climate as a new urban policy object involves considering it within a broader set of policy fields, practices, institutional structures and habits, by assuming that all these elements act as strong determinants of the shaping of climate as a local issue" (1096). Scale is yet another key consideration; multi-level governance, which highlights "the connections between vertical tiers of government and horizontally organized forms over governance" (Betsill and Bulkeley 2006, 149) is another critical theme and incorporates the kind of "horizontal [and] vertical coordination" which van der Heijden includes in his list (2019, 4-5). This idea takes into account the dynamic between local, regional, and national policies and that one cannot analyze urban policy processes alone - it needs to be in conversation with these larger scales as well (McKendry 2016).

Experiments

The concept of governance "experiments" has become a prevalent theme within urban governance literature (Hoffman 2011, Broto 2017, Smeds and Acuto 2018, Bulkeley 2011 , Bulkeley 2013, Bulkeley et al. 2014, van der Heijden and Hong 2020). According to Hoffman (2011), "experimentation implies innovation and trial and error… with new forms of governance unrelated or only loosely connected to the traditional mechanism of multilateral treaty negotiations" (p. 17). Examples of experiments include the C40 Cities Climate Leadership group, the Climate Registry, Transition Towns, and the U.S. Mayors Climate Protection Agreement, among many others (Bulkeley 2013).

Hoffman also lists three criteria for an initiative to be dubbed a climate "experiment": they make "rules (broadly conceived as including principles, norms, standards, and practices)"; they are separate from the Kyoto Protocol and any national regulations; and they "cross jurisdictional boundaries" either vertically or horizontally (2011, 17-18). Included in the experimentation category, one could argue, is the Sierra Club's Ready for 100 network. Given that the Ready for 100 campaign has a set of recommendations for elements that cities can include in their commitments such as "Ensure Justice, Equity, Affordability, and Access" and "A Transparent and Inclusive Planning and Implementation Process", RF100 satisfies all of these criteria and can clearly be viewed as an experiment, one with far-reaching implications for renewable energy usage ("Committed," Sierra Club). Currently, 165 cities and towns have made commitments, while there are 65 active campaigns across the country ("Ready for 100," Sierra Club).

Justice and Climate: History, Theory, Scholarship

Historical Context: Justice Movements

Climate change is certainly not just about environmental impacts, as it is intricately interwoven with social justice issues and human well-being. While a survey of the history of the environmental and climate justice movements is beyond the scope of this paper, a brief overview of their development and interconnectivity is warranted, as the latter has developed out of the former. The following summary draws upon the work of Schlosberg and Collins (2014).

Burgeoning in the U.S. in the 1980s, environmental justice (EJ) as a movement initially developed in response to the inequitable distribution of both environmental ills such as toxic waste sites, landfills, and pollution, though the link between environmental activism and social

justice precedes that era. Oftentimes these environmental harms were, and indeed still are, disproportionately located in low-income areas and communities of color, while at the same time, these groups did not benefit from the same kinds of environmental protections of the more affluent and privileged. An important milestone came in 1987 with the publication of "Toxic Wastes and Race in the United States" which demonstrated this inequity nation-wide (Commission for Racial Justice 1987). There are more elements, however, to the EJ movement than distribution, alone. Attending to underlying structural causes for this injustice has been a key part of the movement, through which environmental racism as a concept has developed. In addition, the desire for participation in decision-making processes is vital for marginalized communities. As Schlosberg and Collins (2014) argue, given the diversity of notions of justice within EJ, a singular definition of the movement is not feasible; broadly, it encompasses numerous themes such as work safety, public health, indigenous rights, economic and social justice, and other issues. Over time, the EJ movement has broadened to include other issues and has been adopted by other nations and international institutions including the UN.

Climate justice developed out of the groundwork set out by EJ. Internationally, it emerged in 2001 with the founding of the Environmental Justice and Climate Change Initiative which was developed after the first Climate Justice Summit at the sixth meeting of the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP6). It outlined ten principles including the reduction of fossil fuel emissions, justice across generations, and protection for vulnerable groups. Since then, climate justice efforts on the international stage have proliferated. For example, the Bali Principles of Climate Justice were established by the International Climate Justice Network in 2002, and other networks have formed including Climate Justice Now and Climate Justice Action network.

In the U.S. specifically, the Congressional Black Caucus published a report in 2004 which showed that, although African Americans are not as responsible for climate change given they have not emitted greenhouse gases to the same extent as the average American, they will suffer its impacts, including health and economic hardship, disproportionately (Congressional Black Caucus Foundation Inc. 2004). Furthermore, mitigation policy, if not crafted carefully, could exacerbate inequities between African Americans and other groups. Hurricane Katrina was another central marker in the development of climate justice, as its devastation was suffered more severely by minority and impoverished communities. After Katrina, "the connection between environmental damage and the continued vulnerability of communities brought more energy and significance to the issue of climate change" (Schlosberg and Collins 2014, 363).

Climate justice is too broad as a field and concept to be easily defined, but can be divided into three main spheres: academic theory, NGO perspectives, and grassroots perspectives, though it is developed most "thoroughly and authentically" in the grassroots which incorporates numerous concerns including "for the inequitable impact fossil fuel production has on a range of vulnerable communities, for participation and procedural justice, for the basic functioning and profusion of needs and vulnerable communities" (ibid., 364, 368). Justice concepts from EJ are "replicated and extended" in these ideas (ibid., 368). However, the notion of restorative justice - transferring resources from the most to responsible to most vulnerable - has greater emphasis in the climate justice movement. Ultimately, the environmental and climate justice grassroots movements have "influenced each other, and even fused in many ways" (ibid., 370).

Interestingly, Ready for 100 seems to incorporate elements of both the NGO and grassroots perspectives. Firstly, the Sierra Club is, itself, an elite environmental organization with a national reach and operates from a privileged position. Nonetheless, RF100 also maintains a

strong commitment to justice, and as stated on its website, the campaign is "creating healthy communities with family-sustaining, union jobs, moving to community-based power, and ensuring racial, economic and environmental justice" ("Take Action," Sierra Club). As will be shown below, the campaign is acutely aware of the disproportionate impacts of climate change and the importance of participation and local needs. It therefore seems to at the very least recognize some of the perspectives of the grassroots climate justice movement as represented by Schlosberg and Collins. However, this is not to downplay the organization's problematic history and the fact that greenwashing on the part of the Sierra Club is a very real risk which it should work to prevent. Still, Ready for 100's concerted attention to justice is important.

Justice Theory

Analysis for this research relies primarily on the justice framework elaborated by Schlosberg (2004, 2007b) which consists of distributional, procedural, recognition, and capabilities justice. Schlosberg draws upon the contributions of numerous theorists including Rawls, Fraser, Young and more in his framework, while he is not the first to conceptualize the "trivalent" frame of justice - which consists of the distributional, procedural, and recognition forms - he adeptly compares and interweaves these lenses in his work. He also applies this framework to the EJ movement at large, which I describe briefly in each subsection. While he also touches on capabilities justice, a theoretical branch developed by Sen and Nussbaum, to limit the scope of my work, I do not elaborate on capabilities theory here or apply it to this study, though this is an avenue for further research. However, I do tentatively explore restorative justice, given that it has been included in other works such as McCauley and Heffron (2018), though is currently undertheorized. Lastly, as additional considerations, I lay out Schlosberg's

explanations of analyzing justice at the group level in addition to the individual, his emphasis on the necessity of a pluralist understanding of justice, as well as the importance of learning from movements in the real world. While these concerns are important to acknowledge, at the heart of analysis remain the frames of distributive, procedural, recognition, and restorative justice

Distributional

The distributional component is the most well-established branch of justice theory, as it was hegemonic for decades. There are several different theoretical avenues when it comes to distribution, but the broad idea focuses on "how and to what end, should a just society distribute the various benefits (resources, opportunities, and freedoms) it produces, and the burdens (costs, risks and unfreedoms) required to maintain it?" (Schlosberg 2007b, 2). Put differently, it concerns "how and what gets distributed in the construction of a just society" (ibid., 3).

Inequitable distribution in the context of environmental justice incorporates numerous issues including environmental "bads" such as hazardous waste sites, incinerators, and pollution exposure which are often located disproportionately in low income neighborhoods or communities of color (Schlosberg 2007b, 11). However, environmental "goods" like greenspaces, clean water, and healthy foods are also inequitably distributed (ibid.). When it comes to climate change and energy transitions, specifically, distributional concerns have been invoked in relation to the dichotomy between those who emit and those who suffer the consequences of those emissions. The "double inequality" of climate change refers to the fact that while the Global North has produced the vast majority of emissions, nations in the Global south will be disproportionately impacted by the combustion of those fossil fuels (McCauley and Heffron 2018, 4). Energy justice scholarship also points to the distribution of vulnerabilities in

different populations; some communities due to accessibility or affordability issues, are simply more vulnerable to the impacts of climate change (ibid.).

Procedural

The next element of "trivalent" justice focuses on societal participation in decision-making. In the words of Young, "democratic decision-making procedures [are] an element of and condition of social justice" (Schlosberg 2007b, 15).

Procedural justice has been one of the central concerns of the EJ movement in the U.S.. Environmental racism has led to the exclusion of people of color from decision-making bodies and processes, and other factors, such as class and gender can lead to this result. According to Schlosberg, there are three main demands from EJ groups when it comes to procedural justice: information about risks and hazards that they may face, inclusion in decision-making and lastly, collaboration and participation in research processes (Schlosberg 2007a, 22). He argues that "the construction of inclusive, participatory decision-making institutions - speaking for ourselves, a 'place at the table,' equal, informed, respectful participation - has consistently been at the center of environmental justice demands" (ibid., 19). Participation is also relevant to renewable energy transitions; for example, McCauly and Heffron assert, procedural justice is "a mechanism for ensuring the long-term acceptability of renewables in communities" (2018, 4).

Recognition

Recognition justice entails explicitly acknowledging structural factors such as disempowerment and discrimination which contribute to distributive injustice. Schlosberg writes, "the point is to examine the range of social and cultural values and practices that impede the full

recognition of a group as an accepted member of the moral and political community" (Schlosberg 2007b, 6). Furthermore, not recognizing differences between groups contributes to maldistribution. According to Young, "where social group differences exist and some groups are privileged while others are oppressed, social justice requires explicitly acknowledging and attending to those group differences in order to undermine oppression." (ibid., 5). Ultimately, misrecognition is an injustice itself, while recognizing structural inequality and underlying processes that produce oppression is an important part of helping to foster a more just world.

Schlosberg focuses on two understandings of what recognition, itself, entails. The first, developed by Charles Taylor and Alex Honneth, emphasizes the psychological importance of recognition at the individual level. Misrecognition through this lens causes harm to others and damages their understandings of themselves. The second frame, put forward by Fraser, focuses on structural misrecognition which can take place via three processes: "cultural domination," "nonrecognition," and "disrespect" and does not place so much emphasis on individual psychological impacts (Schlosberg 2007b, 8). While these two lenses appear quite disparate, Schlosberg, like Fraser, argues that both are relevant: "misrecognition may be both individually experienced and structurally constructed" (ibid., 9). Due to the nature of the research, this paper focuses on structural considerations but does not claim that psychological experiences are absent.

Schlosberg also pushes back firmly against some critiques that recognition is assumed within the distributive frame, arguing that such an assumption is not supported empirically and that the struggle for recognition is just as significant as that of distributional justice. Furthermore, it is crucial to understanding the underlying determinants of inequitable distribution, and recognition is an essential part of that process.

In terms of environmental justice, Schlosberg makes it clear that marginalization contributes significantly to disproportionate struggles with environmental ills: "it is a general lack of value of the poor and people of color that leads to this distributional inequity" (Schlosberg 2007a, 14). Cultural recognition and respect is another key concern, as minority cultures are recognized improperly or worse, ignored or denigrated. For some communities such as certain Native American groups, this kind of respect is important for the longevity of their communities and cultures. Bulkeley et al. (2014) have also incorporated recognition into climate justice considerations through their own framework and argue that it is essential to "establish whether interventions in the name of climate change serve to maintain the interests of an elite at the expense of a minority, and as such perpetuate patterns of inequality in the city, or whether they are instead able to shift the terms of debate, make space for alternatives, and address existing forms of inequality." (33).

Interconnectedness

One of Schlosberg's most adamant assertions is that the notions of distributive, procedural, and recognition justice are thoroughly interwoven. Both inequity and misrecognition make participation more difficult, and at the same time, lack of participation hinders progress towards distributive and recognition justice. Ultimately, "inequitable distribution, a lack of recognition, and limited participation all work to produce injustice and claims for justice are integrated into a comprehensive political project in the global Environmental Justice movement" (Schlosberg 2004, 528-529).

Restorative

Restorative justice, while not explored by Schlosberg, is one of the major components of McCauley and Heffron's (2018) just transition framework which they developed in an effort to link various fields of justice theory together. Restorative justice's purpose is "to repair the harm that has been done to an individual, rather than simply focusing upon punishing the offender" (McCauley and Heffron 2018, 5). The authors explain that restorative justice in energy transitions can be applied to unemployment due to the decline of the fossil fuel industry as well as past harms against individuals and the environment. They acknowledge that the concept of restoration has not been sufficiently developed by climate, energy, and environmental justice scholars thus far (ibid.). My research seeks to identify language and concepts put forward by interviewees and policy documents that have restorative implications while recognizing that this concept has not been fully developed by theorists. Insights from this research can inform future theorization.

Additional Considerations: Groups and Plurality

Schlosberg highlights that while much of justice theory focuses on individuals, the experiences of groups are critical because injustice is often suffered at this level. Indeed, "within the conceptions of recognition and participation, or within the growing capabilities framework, groups can be seen as both the environment within which individual justice is experienced and as a realm of justice in its own right (Schlosberg 2007b, 24). Analysis for this paper in fact focuses on justice at the group level, again due to the nature of the research and not to a desire to minimize or ignore the importance of individual experiences.

Importantly, he also explains that there need not be a universal conceptualization of justice that applies in all cases; instead, there can be multiple understandings of what is just, and certain elements may be applied differently in different contexts. Ultimately, "an environmental justice movement can be unified, but it cannot be uniform. An insistence on uniformity will limit the diversity of stories of injustice, the multiple forms it takes, and the variety of solutions it calls for" (Schlosberg 2004, 534-5). Schlosberg also advocates for EJ organizing via a network approach with democratic practices as opposed to the establishment of a large, centralized organization.

Justice in Urban Climate Governance Scholarship

The justice literature is vast, but three main branches are particularly relevant to climate action in cities: environmental, climate, and energy, justice. A more nascent field is that which centers around the idea of just transition, which focuses on the process of switching from fossil fuel use to renewable energy.

EJ literature incorporates issues of distributional, procedural, and recognition justice and serves as a foundation for other schools of climate literature, including climate justice. The latter deals primarily with issues of rights and responsibilities on the global scale, though local applications share more in common with the EJ literature in terms of addressing issues like participation. In a 2014 case study, Bulkeley et al. argue that within climate justice scholarship, not enough emphasis is placed on the local urban level, and analyze five different cities through the lens of climate justice. They develop a framework that draws upon existing attention to rights and responsibilities (Bulkeley et al. 2014).

The energy justice field has a more narrow focus on energy systems and technologies and how these relate to vulnerabilities among groups. For example, some communities may have less access to energy efficiency or suffer from energy insecurity. Like the climate justice field, energy justice has its roots in EJ principles, and it is only recently starting to address how a just energy transition can and should take place.

The idea of "just transition" has recently surfaced in the literature to explore systemic change in terms of how it originates and unfolds and what drives the transition. MCauley and Heffron (2018) put forward this framework as a way to synthesize the environmental, climate, and energy justice scholarships. They define just transition as a "fair and equitable process of moving toward a post-carbon society" which incorporates distributional, procedural, and restorative justice (2, 5). In terms of cities in particular, Hughes and Hoffman (2020) put forward just urban transition (JUT), "the fusion of climate action and justice concerns at the urban scale" (2). JUT connects procedural, distributional, and recognition concerns with a focus on transitions and the political and structural dynamics therein. According to the authors, "the pursuit of JUT is not exclusively concerned with remedying past injustices, but includes the larger challenge of addressing structural inequality, building broad coalitions, and recognizing interdependencies as cities pursue a low carbon future" (Hughes and Hoffman 2020, 8).

Research Gaps and Considerations

According to van der Heijden (2019), several methodological holes remain in the urban climate governance literature at large; when it comes to case studies, most published works focus on larger cities and those in the Global North, and in terms of comparative studies, there is a need for more medium-n (6 to 30 cases) and large-n studies (31 cases or more). The present

research seeks to fill several of these; though it focuses on the United States, it utilizes a medium-n approach and incorporates a range of city sizes within its purview to "scrutinize the exploratory reach of the accumulated knowledge base" (van der Heijden 2019, 7). It has also been noted that national city networks are understudied (Fuhr et al. 2018), so the focus on a U.S.-specific network here is warranted.

Finally, Hughes and Hoffman (2020) argue that while there are substantial bodies of work which deal separately with urban climate initiatives on the one hand and justice as it relates to climate change on the other, there is a need for more research which focuses on the connection of these fields: "the nature and dynamics of, and requirements for, a just urban transition… are not well understood" (1). Indeed, in a survey of initiatives in 100 global cities, Bulkeley et al. (2013) found that only 23/75 (31%) of adaptation experiments and 131/551 (24%) mitigation experiments incorporate justice to some extent (919).

My research, though it does not utilize "just urban transition" terminology, aims to help fill this research gap in the connection between climate justice and the urban climate initiatives by dedicating concerted attention to how justice is conceptualized and promoted in various cities' commitments to renewable energy. In this endeavor it mirrors the work of Fisher (2014) and Bulkeley et al. (2014). Schlosberg (2004) brings attention to the need for theorists to engage closely with and learn from the actions of organizers and activists on the ground to better understand how EJ is pursued in reality; movements "challenge our own discourse of justice in academia as well, and we would do well to listen in" (537). Indeed, this is one of the aims of my project: to observe how actors pursue justice in climate policy advocacy and use those insights to inform theory and policy.

Data and Methods

Data

For this study, I conducted 25 semi-structured interviews with organizers and volunteers from 12 different cities that have been recognized by the RF100 network, in addition to two interviews with national staff members. I focus here on 18 interviews from six of these cities: Athens, GA; Chicago, IL; Columbus, OH; La Mesa, CA; Madison, WI; and Sarasota, FL. These localities were chosen based on geographic and population size diversity and the fact that more than one interview was conducted for each. The line between town and city is not always clear and can often vary state to state. The RF100 network, itself, recognizes any local municipality and lumps "towns and cities" together on its website's map display. To gain greater detail for size categorization, I follow Lamb et al.'s (2019) scheme of city population size with small denoting less than 300,000, medium being 300,00 to 1 million, and large being 1 to 10 million inhabitants. I use the threshold of 50,000 which indicates the smallest population of a "micropolitan" area. According to these conditions, the cities above can be categorized as shown below.[1]

Small:

Athens (125,409)

La Mesa (59,722)

Madison (255,786)

Sarasota (57,185)

Medium:

Columbus (881,694)

Large:

Chicago (2.71 million)

[1] U.S. Census Bureau population estimates used here are from 2017, as this is when the earliest commitment of the six cities was passed.

Interview questions addressed themes such as the challenges and opportunities that participants and their respective coalitions or local networks faced and how each local campaign conceptualized and promoted justice. Interviews were conducted over the phone or via virtual conferencing technology such as Zoom. With consent, these interviews were recorded and transcribed for analysis. Analysis of cities' resolutions and other relevant documents and reports accompanied data collection via interviews.

Adaptive Theory and Frameworks Guiding Analysis

I coded interviews using both deductive and inductive logic and, inspired by van der Heijden (2019), utilized adaptive theory (Layder 1998) as a guide. This approach, though it leaves space for innovation and novel insights generated from the data, does not ignore prior research and theoretical contributions. Instead, it allows the researcher to utilize these processes in tandem to generate her findings: "the dual approach ensures that extant or prior concepts and theory both shape and inform the analysis of data which emanates from ongoing research at the very same time that the emergent data itself shapes and moulds the existing theoretical materials" (166). I utilize three frameworks as part of my deductive approach. First is a combined "challenges" list which draws upon the research of (Bulkeley 2013, Chu et al. 2018, Hölscher 2019). Second is the list of "enabling factors" enumerated by van der Heijden (2019). Third is a justice framework based on the work of Schlosberg and McCauley and Heffron (2018) which incorporates distributional, procedural, recognition, and restorative justice (see Table 1). Restorative justice is included, though analysis is tentative due to the relative lack of its theorization in the urban climate governance space. Key words, phrases, and passages were coded in interview data to demonstrate the applicability of prior research and theory elaboration.

Simultaneously, as adaptive theory stipulates, this prior knowledge was not restrictive; it permitted novel patterns and observations to be coded as well including challenges, opportunities, and justice concepts.

Table 1: Justice Framework

Distributional
- Environmental “bads”
- Environmental “goods”
- Vulnerabilities
Procedural
- Information
- Inclusion
- Citizen Science
Recognition
Addressing:
- “Cultural domination”
- “Nonrecognition”
- “Disrespect”

Restorative
Addressing:
- Fossil fuel job loss
- Historical injustice

Researcher Positionality

I approach my research as a self-identified environmental activist who is passionate about climate action and intrigued by policy-making at the urban level. I have, myself, volunteered with the Chicago RF100 campaign for about a year and a half, and this involvement likely resulted in Chicago interviewees' being more comfortable sharing their thoughts with me. As a white woman from a privileged background, I fully acknowledge that I have not experienced the structural disadvantage and marginalization that I address in this study. By engaging with issues of equity and justice as they relate to climate policy, I am not attempting to claim expertise on these issues. I instead endeavor to make observations about how various policy efforts have unfolded and how they relate to justice and equity as these concepts appear in the literature and as I understand them now. Through this process, I attempt to compare what I have read to what is unfolding in the real world. I am always learning, and this project has helped me do so significantly.

Findings and Analysis

Challenges and Drivers

Challenges

Challenges faced by organizers and officials spanned across a wide range of issues, though several common themes emerged; these include financial concerns, issues with collaboration and cohesion, difficulty with engagement and inclusion, the entrenchment of infrastructural energy systems and processes, issues pertaining to discussions with decision-makers. Some of these patterns cut across categories in the 5-pronged framework outlined in Table 2 (see Appendix).

Funding surfaced as a concern in both Columbus and Chicago, with one interviewee from both of these cities identifying this issue. Funding here is a blanket term encompassing the distinct issues of resources for advocates and those for local governments. Columbus is perhaps a special case, as Cathy Cowan Becker, the lead organizer for the RF100 campaign, described how she separated her campaign's work from the local chapter due to interstaff tensions. Drew O'Bryan, a national staff member, also highlighted during his interview that financial constraints are a common, highly burdensome issue encountered by local campaigns: "cities are always strapped [for] funding. That's honestly the biggest barrier of all."

With respect to the theme of collaboration and cohesion, this applies to the dynamic among groups working within coalitions as well as relationships between actors like organizers and consulting firms. In Chicago, a volunteer noted that the diversity in groups' priorities could make cohesive action difficult. Kyra Woods, the former Coordinator for the RF100 Chicago Collective noted that "one of the biggest challenges was a little bit of logistics in terms of how do we really write this in a way that is collaborative but also is ambitious and cohesive?" It is important to note that while a variety of opinions or priorities may make the policy process more

challenging, this diversity is a crucial part of inclusion and representation. With respect to the idea of collaboration and working together effectively, in La Mesa, David Harris, a former organizer with San Diego 350, described how a consulting firm involved in the policy process was not very responsive to what advocates had to say in terms of incorporating and addressing their concerns: “they would hold a workshop and we'd give them all our ideas and tell them what our priorities were, but we didn't see them reflected in the plan.” Finally, in Athens, Dan Everett, a member of the 100% Athens steering committee, described how it is difficult for a small group of volunteers to reach out to and collaborate with larger, more well established stakeholders, noting how with “somebody like the University of Georgia…[They] may be ready to talk to like the mayor of Athens, but they're not really ready to talk to some rinky-dink local community group.” These issues demonstrate that inter- and cross-collaboration can be challenging.

Engagement and inclusion of a variety of actors including environmental justice organizations and underrepresented or marginalized groups stands out as another noteworthy pattern. Alex McCleese, a volunteer with the Ready for 100 Chicago Collective, described that it was difficult to get input from environmental justice groups. Indeed, inclusion of and outreach to vulnerable or underrepresented groups was also a challenge in Sarasota. For example, Jeffrey Vredenberg, the current Sustainability Manager for the city who worked with the previous manager during the RF100 initiative, mentioned how “it tends to be a very white, very affluent group of people that comes to the Ready for 100 or is participating in these meetings, and so trying to reach other communities or communities of color - we always struggle with that in our office and the city in general I think.” In Athens, Dan Everett described difficulty with outreach in this way: “there's a lot there's a lot of people in this community, this beautiful Athens community, who are totally marginalized and really don't feel like they have any voice in the

community, don't feel as if the government represents them. And so we want to give these folks an opportunity to have input and have a voice and have a seat at the table, but it's really going to be a challenge to persuade them, per se, folks if they actually want to come to the table."

In terms of logistics and facilitating inclusion in Madison, Cassie Steiner, Senior Campaign Coordinator for the Sierra Club Wisconsin Chapter, mentioned how it was difficult to schedule public meetings to accommodate student's schedules, and on a more general note, Carol Myers, another member of the 100% Athens steering committee, described how simply remaining involved in policy-making can be difficult due to complexity of political processes. Thus, interviews demonstrated that the broad theme of inclusion whether pertaining to students, or underrepresented groups, or involvement in general is a key challenge for urban climate policy, a trend supported by previous research (Chu et al. 2018).

The next broad theme that recurred in interviews is that of engrained utility infrastructure or agreements that limit change or policy ambition. In Sarasota, Sean Sellers, a volunteer with the group that later became Ready for 100 Sarasota, explained how the franchise agreement with Florida Power & Light constrained how quickly a 100% goal could be achieved. Even though a community-wide goal for 2030 aligns more closely with what is scientifically necessary in terms of renewable energy, the franchise agreement ends in 2040. In Madison, a Sierra Club organizer, also mentioned the difficulties posed by utilities, describing how they are often conservative and "tend to be pretty well-inserted into a lot of communities, and so pushing hard on them is often a difficult task." Finally, O'Bryan from the national RF100 team described how "utilities will have contracts, franchise agreements with cities for decades at a time, and those make it difficult to affect change at the utility level."

Issues pertaining to discussions with decision-makers also stood out as a key issue from this research. In La Mesa, educating decision-makers about climate issues and policy as well as addressing their apprehensions about the enforceability of a policy were notable hurdles according to a former organizer with the Climate Action Campaign. This education included showing how issues of climate and equity are intertwined. Participants from Athens and Sarasota also highlighted this process of engaging with decision-makers around equity and justice; Mary Songster, also on the 100% Athens steering committee, explained that "one of the biggest hurdles was demonstrating that this was going to be equitable, you know, showing equity was very important, and we spent a lot of time researching and trying to craft language that said, what we are going to do as community is for the community." In Sarasota, Jeffrey Vredenberg mentioned how question about housing and affordability were difficult topics to broach with the Commission: "we had to be real with the Commission and say we're not we're not entirely sure, you know, it [emission reduction] might impact it [the cost of housing] a little bit, but, you know, is it worth paying five percent more for housing if you're safer and healthier in that housing? You know, that's, that's a policy question… but if you're struggling to pay rent, you know, someone might choose a different thing, and you can't blame him for that. So, those type of questions I think were difficult." Overall then, discussion with decision-makers, particularly as they related to issues of equity, were challenging in some cities.

Other equity-related challenges, though each is unique to an individual city, are worthy of mention here as well. The first of these relates to the issue of greenwashing in Chicago. Woods described how tensions developed between RF100 actors and environmental justice groups in the city, because the latter felt as though the campaign was promoting renewable energy as a cure-all fix for the injustices and hardships facing marginalized communities and not listening to their

concerns about the struggles they faced on the ground. In Woods' words, "it's greenwashing when you say we've got to do it this way with clean energy investment and not recognize the ways that it currently is oppressing folks and not standing up to prevent diesel trucks from expanding into neighborhoods or preventing warehouse expansion, right. If we weren't going to show up in those places, which are continuing to degrade air quality, it wasn't fair for us to just throw a clean energy commitment in the front and say that will fix it." This tension highlights the importance of recognition and procedural justice which foster close dialogue and understanding between stakeholders. Another equity-related issue concerned social justice infrastructure in Sarasota and the lack of civil-society groups dedicated to environmental justice, specifically. Sellers noted that the city's small size makes it more difficult or less likely for such groups to form.

It is also important to elaborate upon concerns highlighted by national staff given that these individuals interact with actors and stakeholders from numerous cities across the country, including those not mentioned in this study. Firstly, O'Bryan described how states often have significant control over utilities, while local municipalities have more limited authority. This concern demonstrates the importance of multi-level policy considerations when it comes to climate action. Additionally, Laura Comer, another national RF100 staff member, noted the issue of city officials' relying excessively on civil sector actors to develop technical solutions and policy: there is "pushback from cities that we also need to be the architects the engineers, so like energy specialists, is a factor and a challenge, but a bigger factor and challenge is giving our teams permission that they don't suddenly need to become the energy experts to do all of those things... So, working to address that with our teams and that kind of mindset is a big challenge."

Ultimately, it is not feasible to describe all of the obstacles and difficulties faced by interviewees in detail here, but this general summary provides a look into broad patterns across participants as well as challenges identified by national staff. The hope is that this analysis can inform future campaigns and climate mitigation efforts. The next step is to determine the best strategies for overcoming these hurdles.

Drivers

The most common categories when it comes to drivers within the deductive framework include a favorable political and legal context, network membership, and inclusion/collaboration. For those that fall outside the overall framework (Heijden 2019), there was some overlap which suggests potential for further development of the overall schematic, particularly when it comes to national political context, media coverage, and grassroots/community pressure.

While all of the drivers identified by interviewees (see Table 3 in Appendix), as with challenges, are too numerous to be detailed fully here, a broad summary of themes is appropriate. Political context, unsurprisingly perhaps, surfaced as an important factor in several cities, including Athens, Madison, Sarasota, La Mesa, and Chicago, according to participants. I include within the notion of "context" both local political climate and relationships with key officials whereas van der Heijden (2019) appears to focus more on the regional and national levels. In terms of local political climate, Carol Myers explained for example that it "seemed so easy to get it [the Athens commitment] through the political machine, and that's because of all the work that myself and others have done, much others have done, over twenty plus years getting progressive candidates into our city government." On a more regional scale, a former organizer in La Mesa mentioned how having other committed cities in the same region in California was helpful, as

advocates could push for La Mesa to be a leader by being the first city in East County to do so. For Athens, La Mesa, and Chicago, relationships with local officials were also an important supporting factor. In the latter for example, Woods explained that there were "political relationships that I think we were able to lean on." Regional and local context then, both in terms of political climate and connections, were important components across several cities in this study.

When it comes to network membership, several interviewees pointed to the importance of the RF100 national network and as it related to their local work. Columbus' lead organizer explained for example that her team "leaned on national a lot for like how to run the campaign… They had a whole workshop on theory of change and how to decide who your target is and how to target them and how to do power mapping and community mapping." O'Bryan from national also pointed to the benefit of the network: "it's both being local with your solutions and getting to be a part of something too, and I think that that's one of our biggest strengths." Furthermore, the platform of Ready for 100 alone factored in as an important element for some interviewees, including individuals from Columbus, Sarasota, and La Mesa. Cathay Cowan Becker explained, "It's a huge platform, so [if] you say to someone 'I'm with the Sierra Club,' you know, people know what that is, and they know what it means, and it carries weight and credibility," while Lynn Nilssen, a volunteer in Sarasota mentioned that one of the most helpful aspects of being connected with RF100 was "the brand recognition of the Sierra Club, and the fact that the campaign existed, and there was a national website and a national presence." Importantly, while La Mesa did not communicate closely with the RF100 network during its campaign, being recognized as a committed city is, according to a former organizer with the Climate Action Campaign, "good visibility for our organizations" particularly in terms of funding, though she

did not identify explicitly include this benefit as a driver for the campaign. Thus, all of these factors demonstrate significance of networks in facilitating urban climate governance need not necessarily focus on city governments primarily.

Involvement of stakeholders was a key point for multiple interviewees, and this participation took many forms including community participation, partnerships with other organizations, and communication with and/or education of decision-makers. The significance of community input resurfaced in multiple interviews, including participants from the national team, Madison, and Chicago. Laura Comer described how it is important for "the vision and the commitment [to] be really led by and for the community." Partnering with other organizations was another notable factor in Athens where the sustainability department works with the Southeast Energy Institute in Atlanta, the latter, according to Everett, the "key consultant helping us do a lot of this stuff." Several interviewees also pointed to the importance of educating decisionmakers. Sean Sellers from Sarasota explained how "you have new people coming in, and that's staggered, but you got to do, you know, the work to kind of get them up to speed.

Other drivers that fell within van der Heijden's framework, though less common based purely on interview data, include factors such as local authority for policy-making in Athens and the importance of ambitious leadership, with these leaders being "local climate champions" (Athens, Madison). However, not every driver collected through interviews can be neatly incorporated within the framework at hand. As opposed to the analysis of barriers, these are more difficult to sort into the respective general framework utilized. However, there was some overlap which suggests a potential expansion of Heijden's list. These include ambition and desire for action based on cultural awareness and lack of national momentum (Chicago, Athens, and Sarasota),as well as the importance of press coverage (Columbus and Madison) and grassroots

pressure (La Mesa, Madison, Sarasota). With respect to ambition, Bulkeley (2013) in fact recognizes "new cultural and social perspectives on consumption/production in a post-fossil fuel era" (101) as a sociotechnical driver which further supports the case for isolating this factor within van der Heijden's framework.

There are other elements which could plausibly apply to other cities as well beyond the research at hand here. These include utilizing a sense of competition between cities to drive change (Columbus) and the role of positive attitudes (Athens). An Athens organizer pointed to the fact that being able to demonstrate that a commitment would be equitable was an important part of its success. Again one sees the importance of explicitly incorporating issues of equity and justice into frameworks such as those of Bulkeley and van der Heijden.

Finally, as with challenges, some facilitating or driving factors may be specific to their respective context. In Columbus, for instance, a participant mentioned the importance of the specific choice for a utility provider as a result of a request for proposal, though this factor is specific to Columbus.

Justice: Distributional, Procedural, Recognition, Restorative

In order to analyze how justice is conceptualized and promoted in each of the cities included in this study, I rely upon both interview data and any relevant documents such as resolutions or reports for each city where available. I also include analysis at the national level of the campaign which draws upon the RF100 website, as well as a campaign guidance document and template resolution provided by the national team. The latter is not intended to be adopted by local advocates strictly as written; it simply provides suggested content for resolutions as local actors draft them. I begin with an analysis of how the national campaign frames justice with

respect to the theoretical framework outlined above then continue to do so for each individual city.

National

It is crucial to acknowledge the centrality of justice to the RF100 campaign as a whole. By simply browsing through the campaign website, one can clearly see this prioritization. It's "About Our Program" page states: "we envision healthy, thriving communities across the United States, powered by affordable, community-based, and 100% clean, renewable sources of energy; where our energy system is predicated on racial, economic and environmental justice; where a thriving workforce has access to secure, safe and sustainable jobs; and where there is democratic accountability to ensure that the energy industry is fair, just and aligned with the public interest" (Sierra Club, 2020).

How does this real-world pursuit compare to the theories of justice previously discussed, namely the distributional, procedural, recognition, and restorative framework? As I will show, the broader national campaign incorporates each of these concepts in its comprehensive engagement of justice and equity issues. Nonetheless, RF100 addresses social justice issues remarkably well in its mission and approach to promoting the adoption of renewable energy.

Beginning with distributional justice, national materials bring attention to the inequitable prevalence of economic hardship and climate impacts. The national guidelines for instance state that a renewable energy transition "presents an unprecedented opportunity to address inequity and lift up those most impacted by climate change and fossil fuel extraction, infrastructure, and combustion" (Sierra Club 2017, 3-4). The template resolution also brings attention to the "undue burden placed on marginalized members" (Sierra Club 2019, 2) of a given community, one of

these potentially including energy burden, meaning the amount of one's income that is dedicated to paying energy bills. Among low income households, energy payments can place a significant burden on residents. The national campaign not only addresses distributional concerns with respect to climate impacts and economic burden, but also brings attention to the need to equitably distribute economic benefits of a transition to renewables and ensure access to affordable energy options. The guidelines provide important details with respect to the distribution of benefits: "Ensure equitable access to clean-energy-related economic opportunities (including careers, wealth, and clean energy infrastructure) for vulnerable communities and individuals especially working class and low-income people, people of color, women, and youth. Regulatory models should prioritize ownership and benefits of the new energy system for people of identities that have been historically marginalized by the fossil-fuel economy" (Sierra Club 2017, 4).

Procedural justice, concerning issues of participation and inclusion, is another central concern for the campaign at large. The sixth national guideline is itself, "inclusive and planning and implementation" which entails not only "soliciting input from all of a community's diverse stakeholders on their needs and ideas" but also "listening to and learning from people under-represented in decision-making processes and those who experience forms of racism and inequality" (ibid., 10). These goals are clear examples of procedural justice as described by Schlosberg.

One could argue, as others have when it comes to justice theory at large, that the concerns described above implicitly contain a recognition of underlying structural inequality and systemic racism. However, analysis here follows Schlosberg (2004) and does not treat such recognition as automatically assumed under distributional and procedural issues. The Ready for 100 campaign,

too, explicitly acknowledges these underlying unjust systems within society and its own organizational history. Its campaign principles page states that "we cannot end pollution in a durable way and move beyond an extractive energy system without healing the broken relationships and systemic injustices that create it" (Sierra Club 2021). Here one sees an explicit acknowledgement that systemic injustice supports and perpetuates the fossil fuel economy. Furthermore, the campaign recognizes its own problematic history: "we recognize and acknowledge historical inequality in the work of Sierra Club, and work toward equity" (ibid.). While each of the statements included here may lack detail on the exact nature of the "broken relationships, "systemic injustices," and "problematic history" mentioned, they are nonetheless noteworthy in their direct acknowledgement of these issues.

One of the statements included above also has implications for restorative justice, namely the "healing [of] broken relationships and systemic injustices." The resolution template provided by national provides greater insights into what this kind of restoration justice may look like, though the language utilized is slightly unclear; it states that "a renewable energy transition is an opportunity to redress historical inequities in our community and must be just" (Sierra Club 2019, 5). It goes on to describe that this mission entails fostering employment for displaced fossil fuel workers, ameliorating energy burden, training and hiring residents in communities of color and women, and fostering access to energy infrastructure like community solar. It seems reasonable to assume that the latter three of these are geared towards the goal of redressing historical inequity. However it also separates this mission from the goal of making the transition just which implies that the two are distinct which contrast with the idea of restorative justice. Nonetheless, the materials published by the national team have clear implications for restorative justice and what this could look like for communities.

Local level

The main takeaways from interviews and document analysis of local level case studies are threefold: firstly, not every city engaged with each component of justice. Thematic breakdowns by city are shown below. A subcomponent of the justice framework is included if included in policy documents or reports or mentioned by an interview participant, and facets of justice are bolded if they were explicitly incorporated into policy documents or reports requested by local officials.

Athens: **distributional**, procedural, **recognition**, **restorative**

Chicago: **distributional, procedural, recognition, restorative**

Columbus: **distributional**

La Mesa: distributional

Madison: **distributional**

Sarasota: **distributional, procedural,** recognition, restorative

The second insight, as this summary shows, not every city engaged equally thoroughly with justice concerns. One of the interviewees from Madison and one from La Mesa for example expressed that engagement with equity had been inadequate. Lastly, there were significant differences in some cases between the depth of engagement within documents like resolutions and the descriptions that interviewees provided. While the views of interviewees should not be interpreted as representative of the entire organizations they represent or communities they are a part of, this discrepancy in justice language suggests that formal policy documents could engage with equity and justice more comprehensively.

Athens, GA

Population: 125,409

Resolution passed: May 2019

In Athens, participants' descriptions of how justice and equity were incorporated into the city's campaign were not uniform, nor did they all align perfectly with the resolution itself. The commitment, as written, incorporates distributional, recognition, and restorative justice concerns. Firstly, it acknowledges that "black and brown communities and other economically disadvantaged people will experience the economic, environmental, health, and social harms of climate change disproportionately, and spend more of their income on energy than median households in our community" (United Government of Athens-Clarke County, Georgia Mayor and Commission 2019, 1). It also recognizes that "household income home ownership status, race, and age are historically correlated with the likelihood that a household will spend more of its total income on energy expenses" and that the commitment "will work in a manner to redress historical inequities in our community by prioritizing resources to train and hire people from within marginalized communities." (ibid., 1-2). These excerpts show that the city and other stakeholders recognize historical inequalities and the disproportionate distribution of burdens across the community, and that it is working towards restorative practices by prioritizing economic empowerment for marginalized groups.

While this is the language formally adopted within the resolution, it is also illuminating to gain insight into how organizers and policy-makers, themselves, view issues of justice. It is very clear that they acknowledge its importance and centrality. Mary Songster for instance stated, "it isn't like there's one thing for equity. It's like we look at equity at every point of

anything that we would do to make this transition and ask the question constantly because it has to be asked constantly. [It] can't be stagnant… Just like there's not a direct answer to how do we do this, there's not an answer to exactly 'what is equity?' but we know that we need to be moving towards it all the time." Songster also referenced issues of restorative justice though her claim that "in the south especially, it's also this issue of like, kind of reparations. Like it's not just that we have to make it equitable, like people are owed." What that means in practice, however, is quite difficult and will likely necessitate ongoing engagement and conversation.

Interestingly, Dan Everett addressed procedural justice issues, while these were not addressed in the resolution, itself. An excerpt from his interview included above is worth repeating here: "there's a lot there's a lot of people in this community, this beautiful Athens community, who are totally marginalized and really don't feel like they have any voice in the community, don't feel as if the government represents them. And so we want to give these folks an opportunity to have input and have a voice and have a seat at the table, but it's really going to be a challenge to persuade them, per se, folks if they actually want to come to the table."

Ultimately, in the case of Athens, the city's resolution engaged with several facets of justice, though interview participants addressed procedural considerations as well. Not every interviewee covered each facet of justice included in the theoretical framework, but their explanations were often more detailed and thorough than statements in the resolution. Overall, Athens's case overlaps quite well with national principles and priorities.

Chicago, IL

Population: 2.71 million

Resolution passed: April 2019

Chicago's resolution, out of all of those included in this study, arguably engages most extensively and thoroughly with issues of justice, touching on each thematic component. Similarly to Athens, the commitment acknowledges "disproportionate cumulative impacts of environmental exposures" (City of Chicago Committee on Health and Environmental Protection 2019, 1). It also asserts that "this energy transition is an opportunity to build equity for communities that have been traditionally underrepresented in the energy field and marketplace" (ibid., 2). These statements demonstrate distributional concerns in relation to environmental impacts. The resolution also explicitly states that policies must "fully recognize and respond to the disparate impacts of public health and environmental inequities experienced in low-income and communities of color" (ibid., 3). Here one sees concerted attention to issues of recognition. Furthermore, Chicago's resolution explicitly incorporates a commitment to procedural justice, as it is dedicated to establishing "an inclusive stakeholder engagement process, with particular focus on the needs of low-to-moderate income residents and communities that have been most impacted by environmental injustices" (ibid.). Lastly, the resolution briefly mentions restorative practices through its mention that transitioning to renewables is an opportunity to "right inequity, particularly in impacted communities" (ibid., 2). However, what "righting inequity" means in practice and whether this constitutes restorative justice is perhaps unclear; is ameliorating disproportionate struggle tantamount to restoration? This is a complex question that I am not in a place to answer here.

Interviews largely reflected the priorities laid out in the resolution. Woods explained the importance of recognizing underlying structural issues which underpin disparities we see today. She explained "when we think about justice, I think it's important that we are not simply trying to ensure that benefits are accessible, but also that we correct some of the other issues that have even led to some of the inequities." Her point about greenwashing as explained above also indicates the crucial importance of listening to groups facing hardship and injustice firsthand. Volunteer Alex McCleese also explained that there are many facets of environmental justice to consider when it comes to climate action: "we would think of environmental justice in a lot of ways. Thinking about jobs for example; community self-determination; community leadership; access to things like solar, energy efficiency, and transportation; any geographic inequalities; racial inequalities; utility burden; inclusive financing for efficiency and solar; economic opportunities. So there are a lot of different ways in which you're thinking about justice." This point reflects Schlosberg's argument about the plurality of justice and that it can be conceptualized in different ways.

Columbus, OH

Population: 881,694

Aggregation passed: November 2020

Columbus, unlike the other cities included in this study, did not pass a formal resolution committing to 100% renewables. It achieved formal recognition by the RF100 national team through its passage of a community choice aggregation policy which was listed as a ballot measure in 2020. Perhaps because it lacked the platform of a resolution to more fully elaborate on justice issues, engagement largely centered around distributional concerns. Namely, the policy

charges energy consumers one tenth of a cent per kilowatt hour on their electricity bill, and funds raised will be utilized as grants to low income areas and can be used for projects like energy efficiency. Volunteer Eve Warnock also described that outreach was an important part of the campaign's equity efforts, and that "one thing that was really powerful about the signatures was where we went" because they were able to get signatures from minority groups and spread awareness. Thus, distributional and procedural justice were the biggest themes in Columbus.

La Mesa, CA

Population: 59,722

Climate action plan passed: March 2018

Efforts to get a sufficient climate action plan passed in La Mesa took place over the course of several years. Advocacy groups, including San Diego 350 and the Climate Action Campaign, reviewed proposed plans multiple times but argued that they were inadequate given they did not meet standards established by the California Environmental Quality Act which stipulates that climate policies must be enforceable. In 2018, La Mesa formally adopted its plan, but with a large shortcoming: equity and justice components.

According to the plan itself and interviewee testimony, the city decided to delay providing details about environmental justice until the update of its general plan in 2021 because state law SB 1000 requires general plans to address environmental justice. The 2018 climate action plan also states that the 2023 update will incorporate metrics to monitor social justice efforts (La Mesa City Council 2018). According to Sophie Wolfram, a former organizer with the Climate Action Campaign, "there are no specific equity measures in the climate action plan that we felt were measurable and concrete enough for us to say 'good job you did it.'" In her view,

equity “just wasn’t meaningfully incorporated.” Another interviewee, David Harris, who was previously an organizer with San Diego 350, when asked how the campaign addressed issues of justice, explained how the advocacy organization itself, is making efforts to be more inclusive and representative: “we've really made an effort, not only to build a coalition with the environmental justice community, but to make our organization more inclusive. And we've really achieved a lot in just three years in terms of broadening our membership, bringing in a lot of younger people, people of color, people from communities of concern.” He also argued that the need for equity issues to be described in detail explicitly in the plan given that La Mesa is a small city that doesn’t have large populations that have been impacted by environmental injustice. He described how “environmental justice nonetheless is still very important as we implement the plan. It's just the need for it to be spelled out isn't quite as great for a small city.”

Ultimately, La Mesa’s climate action plan did not engage substantively with issues of justice and equity and instead saved those considerations for future plans and updates. Notably, the joint powers agreement, through which multiple cities in the San Diego area established community choice aggregation and which includes La Mesa, does incorporate some of these considerations, yet the city did not engage with these issues outright. This disparity, in addition to the influence of state level policy on city-level planning, point to the importance of multilevel factors in urban climate governance.

Madison, WI

Population: 255,786

Final resolution passed: March 2019

Madison is unique in this study in that it passed two resolutions: the first established the goal of 100% renewable energy without a date specified. A study was instead commissioned to determine a set of pathways with various end dates to achieve that goal, and the second resolution adopted one of these. Specifically, it committed to Scenario 3: "Renewable Energy and Zero Net Carbon by 2030." Both resolutions and the report, entitled 100% Renewable Madison, are included in this analysis in addition to interview data as they pertain to justice concerns.

The first resolution does not in fact contain any language pertinent to this theme, and the 100% Renewable Madison report is largely technical, though some of its policy recommendations have justice implications including affordable, net zero housing, and the development of "green zones," which would "provide a framework for equitable energy policies by infusing impacted communities with the financial and technical assistance needed for development of local renewable energy resources" (Hammel, Green, and Abrahamson Inc., and Navigant Consulting Inc., 61). This recommendation, though pertinent to distributional justice, lacks detail and is separate from policy analysis of the renewable energy pathways listed in the report. The second resolution does include language pertaining to equity, though it is very brief; in particular it states that the city will push for multiple policy objectives which includes "promoting racial equity and social justice" (City of Madison 2019, 2). It also mentions that the "relevant committees and commissions will apply the City of Madison's Racial Justice and

Equity tool to their plans" (ibid.). While these statements are quite broad, use of the term "equity" suggests that they are most closely related to distributional concerns.

Importantly, the Sustainable Madison Committee did commission a group called EQT by Design to analyze the 100% Renewable Madison Report from an equity standpoint. According to EQT by design, their "analysis is simply (in concept not in practice) how and who is impacted and assessing at all levels where and how is the burden manifested and in what process, system, or policy?" (EQT by Design 2019, 1) This point is relevant to distributional, and potentially procedural, justice. The organization's report showed that concepts such as economic opportunities and savings as well as ideas of equity and justice were introduced in the report but not incorporated into any of the emission reduction scenarios. Its recommendations include forming a workgroup to help promote racial equity and social justice in addition to "[identifying] some key groups that are diverse – racial, ethnic, identity, socio-economic, age and share the report and seek opportunities to collaborate and engage." (ibid., 4) It also asserts that there is a need to describe who benefits from the policy and how. This analysis by EQT by design can help fill some of the gaps in Madison's efforts as they relate to justice.

Interview data was rather contradictory at certain points. Cassie Steiner noted that organizers did advocate for certain equity considerations such as allocation of clean energy, home weatherization, and addressing inequitable utility rate structures which burden low-income households, though not everything they supported was adopted. It is also unclear as to whether these concerns were promoted during the commitment or implementation phase. Another organizer expressed concern about engagement with equity issues and that there is room for improvement in that regard. He described how policy-makers are "looking at the numbers a lot rather than who's impacted… the immediate goal that they have a plan for, laid out at least, is

the- how to get to 100%, renewable energy for city operations by 2030. So that's really just city operations. That does not necessarily involve the rest of the community which is where a lot of the equity considerations would come into play." On the other hand, Stacie Reece, the Sustainable Madison committee described how "we're always embedding racial equity and social justice into everything that the committee does." While the intent may be true, it seems that at the time of resolutions, there were some shortcomings.

Ultimately, based on document analysis and interviews, while the EQT by design analysis was productive, it seems Madison has room to improve when it comes to addressing justice thoroughly during the policy-making process.

Sarasota, FL

Population: 57,185

Resolution passed: June 2017

Sarasota's resolution was passed after an iterative stakeholder engagement process detailed in an accompanying report. The resolution does include justice language and makes specific reference to vulnerable groups: "the transition to 100 percent renewable, zero emission energy sources… will improve air and water quality and protect public health, particularly for the most vulnerable across our community" (City Commission of the City of Sarasota 2017, 1). Other sections are much more broad; for instance it states that the city will "build inclusive community leadership and policy engagement, promote equity in energy and resource costs and ownership of related technologies… and provide regional leadership to address equity in climate and energy" (ibid., 3). The report, entitled Roadmap to 100, for its part describes how participants were asked if a strategy aids "community members who are most in need or who

have historically been under-served" (City of Sarasota 2018, 8). Thus, during the process, policy-makers and advocates do not exclude or bypass marginalized groups.

Participants demonstrated through their interviews a much more in-depth engagement with justice issues than what is evident in the report and resolutions. Sean Sellers discussed for instance it is important to ensure that green building codes do not hinder the ability to create affordable housing, and that efficiency improvements can help to alleviate energy burden for low-income households. Lynn Nilssen mentioned the importance of why inequalities exist in the first place. Finally, Jeffrey Vredenberg discussed how the transition needs to be equitable for everyone, a process which includes skills trainings, green jobs, and other concerns. Commissioners too, wanted to know that the process "would be done in a way that would protect everybody." While separate from the resolution itself, Vredenberg also described a series of trainings designed for directors which would help "make sure that everybody has the same base knowledge of the ways that government has negatively impacted [unintelligible] communities, communities of color in Sarasota, in Florida, in the United States." Furthermore, he explained that hopefully policy-makers, "thinking about all the misdeeds that we've done in the past, [can] be able to craft a better policy that promotes, instead of destroys, equality and justice." While not explicitly tied to the resolution process, this kind of thinking and training has clear connections to recognition and restorative justice.

Each participant clearly acknowledged the importance of equity and justice considerations in the renewable energy policy process in Sarasota. Nonetheless, organizers and policy-makers faced procedural challenges, given that according to interviewees, most of the organizers with the Sarasota Ready for 100 group are white, as were the majority of those who participated in the public engagement meetings. While the city's sustainability manager

explained that they worked to gain input from disadvantaged communities, he said that it was a struggle and usually is.

Summary and Key Takeaways: National and Local Levels

Analysis of content from the national campaign and the six case studies included shows that while the national team engages extensively with issues of equity and justice via its campaign principles, incorporation of these concepts in local commitments is more varied. Context and city size can also be a factor, for as Sellers (Sarasota) mentioned, the city is relatively small, and as a result there are fewer civic groups dedicated specifically to environmental justice compared to other major metropolitan areas. David Harris also argued that La Mesa's smaller size reduces the necessity of equity language in local policy. This claim is objectionable; regardless of city size, justice considerations should always be taken into account. Additionally, multilevel considerations limited the extent to which La Mesa incorporated justice and equity concerns in its climate action plan.

VIII. Discussion and Conclusions

This study has endeavored to shed light on contemporary efforts to promote the adoption of renewable energy in American cities. While much progress regarding urban climate governance has been made in recent decades, key gaps included the dearth of medium-n studies and inadequate inclusion of smaller cities. Furthermore, both national networks and justice in the context of urban climate action are understudied. This research fills this gap through a case study of six cities, including relatively small urban areas. It utilizes semi-structured interviews and analysis of policy documents such as resolutions and reports to expand upon existing research

regarding challenges and drivers at the local level in addition to analyzing how justice concepts are incorporated into urban policy efforts.

While challenges and drivers identified in this study were numerous, several patterns for some cities did emerge. In terms of challenges, the most common included financial concerns, issues with collaboration and cohesion, difficulty with engagement and inclusion, the entrenchment of infrastructural energy systems and processes, and issues pertaining to discussions with decision-makers. Several of these have important implications for urban governance; stakeholder engagement is a crucial part of governing effectively and promoting just policy. It has been identified as a challenge in past research (Chu et al. 2018), so future work should address how to more successfully foster inclusion of a wide range of groups. Educating decision-makers also surfaced as challenging at times in some cities, a notable issue given that this process is likely an important part of governance, as it is a notable way that civil sector actors and government officials interact and share information. How civil sector groups work together and interact with consulting firms are likely also key governance processes, so managing challenges with collaboration is essential. Funding and infrastructure entrenchment are more concrete issues, both difficult to address, but doing so is necessary to most effectively promote renewable energy in cities.

Other challenges, each exclusive to an individual city based on interview data, included greenwashing in Chicago and a lack of EJ groups in Sarasota. Chicago's case points to the crucial process of listening to the needs, desires, and concerns of marginalized communities. Even if a campaign values equity and justice, as Chicago's does, there is still a risk local voices are drowned out unintentionally. Other cities should learn from this case and always be listening and learning from community members about the justice issues they are facing on the ground.

According to national staff, state influence over local-level policy-making and the excessive outsourcing of technical solution development to civil sector actors were also problematic. The first of these issues indicates the multilevel nature of climate policy, and the latter is important to consider for future governance efforts, as it has implications for the allocation of responsibility. Laura Comer stated, “as a constituent and as a stakeholder in this process, I'd be like this is what I need, this is what I want. It's your job as the professional that we’ve elected and have hired in this role to figure out how to do that. For some reason, with clean energy, they're like, ‘well show me that it's possible’ or like, you know, ‘how are you going to make that happen?’” She emphasized that it is the city’s responsibility to bring in experts and not rely on advocates to do that kind of work. I amplify this concern and encourage cities to bring in those experts while simultaneously consulting and engaging with community members to understand their concerns. As Comer put it, “there are different experts and stakeholders that should be involved.” Clearly, how exactly various individuals and groups contribute to policy-making is important, and while civic groups should have a voice, technical expertise is still needed, and this necessity is an important consideration for urban climate governance moving forward.

In terms of drivers analyzed in this study, prominent themes included a favorable political and legal context, network membership, and inclusion/collaboration. The first of these relates to both political climate and relationships with decision makers. Network membership refers to the benefits that being a part of the RF100 network confers such as resource provision and the utility of the platform itself. Importantly, interactions with government officials can be both challenging, as noted previously when it comes to education, yet rewarding as well. Other factors surfaced multiple times throughout interviews though they do not overlap with van der

Heijdend's (2019) framework; these include media coverage, work of grassroots groups, and lack of national political momentum.

Finally, when it comes to justice and equity, findings also showed that not every city engaged with these issues to the same extent. Though the national team has an explicit and well-developed commitment to justice, the extent of this engagement, including formal policy language, varied from city to city, with Chicago's resolution being most comprehensive, followed by Athens and Sarasota. Columbus and Madison both incorporated distributional concerns, while La Mesa lacked substantive engagement with justice issues, instead delaying that engagement to a future plan.

Additionally, it is important to note that the concept of restoration is underdeveloped in the context of climate, energy, and environmental justice; what it looks like in practice will likely vary considerably between contexts. While I can hardly argue what restorative justice should look like as it relates to climate change or where/when it should take place, I simply argue that it is something organizers and policy-makers can consider and discuss with community members and other stakeholders at the local level. Some cities and organizers have already touched on concepts that could have implications for restorative justice and its connection to climate.

Several limitations to this study are worthy of note: firstly, given the scope of this research, only 2-4 interviews were conducted per case study, so the number of viewpoints for each campaign is relatively limited. Furthermore, interviews were conducted with government officials as well as organizers and volunteers in the nonprofit space, though conversations with residents less involved in advocacy would provide additional perspectives. Additionally, availability and responses from organizers and officials constrained the set of feasible case studies, though this research has endeavored to include variety in terms of geography, political

climate, and city size. Finally, this study focused on the commitment phase of the Sierra Club's RF100 campaign, but future research should focus on the implementation of local commitments and how goals are becoming reality, particularly with respect to visions of justice.

Appendix

Table 2: Challenges
(Yellow highlights indicate common themes while bolded items indicate challenges that emerged through interviews)

Challenges	**Cities**
INSTITUTIONAL	
Changes in availability of and access to data	
Dearth of legal infrastructure	
Conflicting policy requirements or directives	
Uncertainty of scientific projections limits coherence of climate messaging	
Limited capacity, resources, and knowledge	
Lack of time and connections	Chicago
Limited financial resources or institutional difficulties spending money on climate initiatives	Columbus, Chicago, National
Limited staffing, personnel departure	
Lack of capacity for developing or analyzing climate models as well as observing or predicting future emissions	
Limited skills, knowledge, experience	
Difficulty with collaboration and cohesion	Chicago, La Mesa, Athens
Educating decision makers and/or addressing their concerns	La Mesa
Lack of or difficulty with engagement, inclusion	
Remaining involved in complex	Athens

political processes	
Promoting decentralised authority and the separation of responsibilities	
Excessive outsourcing of tasks and responsibilities to the civil sector	National
POLITICAL	
Lack of clarity about how to potraty climate change to powerful actors	
Short-term cycles of political authority due to end of terms	
Greater priority or attention paid other policy issues	Athens
Conflicts with other important issues or sectors	Athens
Surmounting messaging that sustainability and development are mutually exclusive	
Insufficient political will	Madison (state level)
facing influential investment interests in development work	
connecting across political interests as well as entrenched differences in values and ideology	La Mesa
Details of policy content	Madison
Planning with ambition	Chicago
Challenging opposition and/or ingrained political and economic interests	Columbus, La Mesa
SOCIOTECHNICAL	

Preexisting building design standards Lack of infrastructure and inability to meet basic needs	
Entrenched infrastructural systems and institutional attitudes that are resistant to change	Sarasota, Madison, National
Current physical infrastructure is expensive and has long life-cycle	Madison
Production and consumption behaviors rooted in fossil fuel use and availability	
Designating responsibility for action to different actors, organizations, and populations	
Incongruence between responsibility for change and scale of the issue	
Existing definitions of definitions of "who has agency" inhibit changes in individual behaviors and social practices" (Hölscher 2019, 56)	
SPATIAL/SCALAR	
Attending fragmentation within and across cities both spatially and politically	
Planning across ecological and jurisdictional boundaries and various political interests among jurisdictions	
Multi-scalar and multi-level considerations	
Varying levels of policy-making power across vertical levels of government (ex. limited formal powers for municipal authority)	National

Delays due to policy requirements at higher levels of government	La Mesa
Planning effectively when public sector capacities are consistently degraded	
EQUITY/JUSTICE	
Purposeful disregard for the marginal and vulnerable	
Insufficient data or knowledge about informal settlement vulnerability	
Inclusion and representation of a variety of stakeholders	Chicago, Madison, Sarasota
Equitable distribution of the outcomes, processes, responsibilities, and benefits of planning activities	Sarasota
Recognition of the desires and the needs and interests of groups who are marginalised and vulnerable	Chicago
Communicating that climate action is a priority for humans and the environment	
Discussing equity concerns with decision-makers	Athens, La Mesa, Sarasota
Lack of EJ organizing infrastructure	Sarasota

Table 3: Drivers

Drivers	**Cities**
A favorable political and legal context	
Local political climate	Athens, Sarasota, Madison
Regional political climate	La Mesa, Madison
Political relationships	Athens, Chicago, La Mesa
Proactive leadership	Madison
Autonomy	Athens
Funding	
Coordination across vertical levels of government	
Interdepartmental coordination	
Network membership	Columbus, Sarasota, National
Inclusion and collaboration	
Community input	Chicago, Madison, National, Sarasota
Partnerships with other organizations or entities	Columbus, Athens
Discussing with and/or educating decision-makers	La Mesa, Madison, Sarasota
Collaboration with other cities (outside a network context)	Columbus
The work of a "local climate champion" (Heijden 2019, 5)	Athens, Madison
Other:	
Broad cultural/political context	Athens, Chicago, Sarasota, Madison

Successfully demonstrating equity	Athens
Staying positive	Athens
Leveraging competition	Columbus
Press coverage	Columbus, Madison
Choice of specific utility through request for proposal	Columbus
Work of organizers/pressure from the community	La Mesa, Madison, Sarasota
Non-binding resolution is easier to pass	Sarasota
Work of volunteers	Columbus
Decreasing price of solar and wind	Madison
Some homeowners and businesses already utilizing solar	Madison

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