Climate Action Planning:

An Intersectional Approach to The Urban Equity Dilemma

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Introduction

Findings of the Intergovernmental Panel on Climate Change (IPCC), the leading international scientific institution on climate change research, unequivocally demonstrate that, without intervention, climate change will have devastating impacts on human communities. Those who face the intersections of racism, classism and sexism have long born the brunt of environmental hazards, both globally and in the United States (Bullard 2005; Chavis and Lee 1987). This is no different when it comes to climate change which, under existing social conditions, puts the global poor, people of color, and women at the greatest risk (Nagel 2012; Douglas et al. 2012; Shearer 2011) and has been projected to be "globally stratifying, because its worst impacts will fall disproportionately on those countries, livelihood systems and 'at risk' populations that are already poor"(Devereux and Edwards 2004: 28). Importantly, such global stratification should not be interpreted as only impacting regions of the Global South. In U.S. cities, the intersecting systems of

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classism, racism and patriarchy have immiserated certain urban communities. This renders them vulnerable not only to climate change itself but also, as we argue in this chapter, to the collateral damage of the very policies intended to prevent environmental destruction.

While the issue of climate change has drawn immense attention from policy-makers the world over, the United States, one of the greatest national consumers of natural resources and contributors of greenhouse gas emissions, has dragged its heels on advancing meaningful national climate legislation. In the vacuum of federal action, cities and states have taken up the mantel for meaningful progress, most commonly through the development of climate action planning (Ramaswami et al. 2012a; Boswell et al. 2012; Finn & McCormick 2011; Krause 2011; Boswell et al. 2010). A Climate Action Plan (CAP) describes the set of policies or programs a sub-national entity hopes to implement in order to reduce greenhouse gas emissions. Most commonly, this includes mandates to generate renewable energy, reduce buildings' energy use, cut transportation and land use-related emissions, and reduce emissions from waste management (Ramaswami et al., 2012a; Boswell, Greve and Seale 2012; Boswell, Greve and Seale 2010; Davoudi, Crawford and Mehmoud 2009)

The proliferation of CAPs created for cities is an exciting development for the environmental movement and has garnered interest from social scientists. Emerging scholarship discusses the most effective ways in which cities across the U.S. can institute, measure and standardize climate change mitigation strategies (Ramaswami et. al. 2012a; Boswell, Greve and Seale 2012; Boswell, Greve and Seale 2010); the distinct roles of policy actors, infrastructure designers, and individuals users in the larger social-

ecological system in which they are embedded (Ramaswami et al. 2012b; Davis and Weible 2011); what factors impact local and state-level decisions to commit to climate protection (Krause 2011; Zahran et al. 2008; Fogel 2007; Selin and VanDerveer 2007; Rabe 2004;); and the governance of climate change programs across multiple levels of government (Betsill and Rabe 2009; Bulkeley and Betsill 2003; Betsill 2001). Additionally, there is growing evidence that local climate planning has neglected issues of social equity (Douglas et al. 2012; Finn and McCormick 2011; Pearsall and Pierce 2010; Saha and Paterson 2008). For those living at the intersections of raced, classed and gendered disadvantage, Climate Action Plans may signal not an improvement but a deterioration in sustainable livelihood. Modeled in a long tradition of urban planning that prioritizes profitable growth at the cost of equity and fairness (Mollenkopf 1983; Harvey 1973 [2010]), CAPs deepen gendered, raced and classed inequities of wealth and opportunity in U.S. cities.[i]

In what follows, we explore the trajectory of CAPs from early policy attempts that were largely gestural and unsystematic (Betsill and Rabe 2009; Bulkeley and Betsill 2003) to today's robust policy devices, integrated into many cities' planning processes with measurable impact (Ramaswami et al. 2012a; Boswell, Greve and Seale 2012; Boswell, Greve and Seale 2010; Davoudi et al. 2009). We then examine the intersections of race, gender and class to examine who does and does not have access to wealth in the urban spaces where the vast majority of CAPs are enacted. Research on racism, classism and sexism has long demonstrated that dominant groups control institutions and resources in a manner that disguises and often perpetuates social inequity (DuBois 1994; Marx & Engels 1978; Friedan 1963 [2001];). This parallels key tenants of neo-Marxian urban

theory. For instance, Molotch's (1976) suggests the city be understood as a "growth machine" that serves elite interests while exacerbating social injustice, damaging the environment, and suppressing public consciousness and dissent (see too: Logan & Molotch 1987). An intersectional analysis allows us to build on these formative insights by seeing how race, class and gender interact to forge urban poverty, while climate policies mask and neglect the uneven social terrain. We conclude with an intersectional assessment of the most common features in municipal CAPs. We suggest that Climate Action Plans render the needs of poor communities of color and some women invisible while doing little to ameliorate cavernous wealth divides in U.S. cities.

Global Climate Change and the Promise of Municipal Climate Action Plans

Greenhouse gases trap heat within Earth's atmosphere. Since the beginning of the industrial age, the burning of fossil fuels has released a large amount greenhouse gas (GHG) into our atmosphere (IPCC 2007). These emissions are a direct result of industrial processes, especially energy generation, from the burning of coal and natural gas to vehicle tailpipe emissions. Recent research demonstrates that current atmospheric concentrations of carbon dioxide are directly linked to warmer temperatures and are currently higher than at any point during the past 650,000 years (Siegenthaler et al. 2005). Furthermore, eleven of the last twelve years are ranked as some of the warmest in global surface temperature since records began to be kept in 1850 (IPCC 2007). According to a 2007 report from the Intergovernmental Panel on Climate Change (IPCC), "Warming of the climate system is unequivocal…" and "Observational evidence from all continents and most oceans shows that many natural systems are being affected by

regional climate changes, particularly temperature increases"(IPCC 2007).

These dire predictions have spurred global action. On February 16th, 2005, the Kyoto Protocol international agreement to address climate change went into effect. The major objective of the agreement was to set internationally binding greenhouse gas emission reduction targets for signatory countries (Layzer 2006). Nearly 200 countries have ratified it to date. Nevertheless, there is continuing disagreement regarding the extent to which wealthier countries, including the U.S., should bear greater responsibility for reducing emissions. It is internationally understood that affluent countries have contributed more to global climate change than poor nations. Still, the prospect that the U.S. faces an increased burden for curbing climate change has resulted in contention within the U.S. government and, ultimately, political deadlock, Because of this, alongside a complex of corporate and political interests, the U.S. Congress has neither participated in the treaty nor promulgated meaningful national climate legislation of its own (Layzer 2006). Instead, those interested in curbing environmental destruction have routed their strategy through sub-national governments, impacting policy choices at city, county and state levels. City governments serve as one of the key laboratories for the creation, implementation, and examination of promising climate policies. Further, Ramaswami et al. (2008) note that cities "exert huge direct and indirect demands on our natural capital" while providing a key site to "engage vast segments of human populations"(6455) in climate change prevention. Because cities house the majority of the global population, municipal climate policy can be a hugely effective means for curbing the generation of emissions.

Early examples of municipal climate action planning in the U.S. date back to the

1990s when cities began to create greenhouse gas inventories, assessing where and to what degree emissions were being generated. Such measurements served as a baseline for setting emission reduction goals and evaluating the success of various strategies (Bulkeley and Bestill 2003; Betsill 2001). However, the policies and programs enacted during these early years were ultimately criticized for being largely symbolic and impractical (Krause 2011; Betsill and Rabe 2009). Green house gas inventories were often incomplete, failing to account for all of the sites from which emissions are generated. Further, emission reduction goals were not adequately linked to the necessary changes in policy or formal "administrative structures" to make a difference (Bulkeley and Betsill 2003: 173). [ii]

As local climate action planning has evolved in the United States it has become more formalized, standardized, and effective. Aligning himself with a global movement, Seattle Mayor Greg Nickels spear-headed nation-wide action on the same day in February 2005 that the Kyoto Protocol went into affect across the globe. While the federal government stalled, Nickels helped launch the U.S. Mayors Climate Protection Act (USMPA) to advance the goals of the Kyoto Protocol through local government leadership and action (USMPA 2013). As of April 2013 there have been more than 1,000 city signatories to the agreement that have committed to reduce community-wide greenhouse gases. In signing the USMPA, these cities affirm that they will employ a variety of climate-related polices, typically taking the form of an official Climate Action Plan (CAP). Leaders of the USMCPA, in turn, provide member cities across the country guidance in drafting CAPs. In juxtaposition to earlier municipal climate action policies, these cities are today given an effective model for how to tie their emission reduction

goals to specific legislation and administrative protocols.

In this sense, CAPs have become *the* climate change prevention strategy in the United States. Since the USMPA, climate action planning has become ever more integrated into traditional city planning processes, complete with formal adoption by city council vote (Ramaswami et al. 2012a; Boswell, Greve and Seale 2012; Boswell, Greve and Seale 2010; Davoudi, Crawford and Mehmood 2009). The state of California is leading the way in U.S. climate action planning with the 2006 creation and passage of AB32, the California Global Warming Solutions Act. This bill has set bold statewide goals to reduce green house gas emissions to the levels they were in the 1990s by 2020, which is more than a 15 percent reduction below 2005 emission levels. Further, AB32 seeks to reduce emissions to be 50 percent below 1990 levels by 2050. In order to achieve these goals, AB32 requires that all California cities and towns adopt municipal level CAPs.

The forecast for CAPs and social equity concerns has not been completely clear, however. In fact, as greater amounts of monetary capital and political will go towards planning and implementing municipal CAPs, some have warned about the pitfalls of fashioning climate change prevention strategies in the mainstream urban planning tradition (Finn and McCormick 2011). Critics suggest that the priorities of economic growth have long trumped those of redistributive equity in municipal politics (Pearsall and Pierce 2010). This system is thus ill-suited for pursuing any version of environmental protection that might constrain the interests of capital (Lutzenhiser and Hackett 1993; Logan and Molotch 1987). With this in mind, we now turn to the dynamics governing access to capital in urban centers.

An Intersectional Assessment of Urban Wealth Inequality

> "For many people, the American Dream is difficult to attain because opportunities are *literally* out of reach"- Chen 2007

An intersectional analysis suggests that racism, classism and sexism cannot be disaggregated when considering the lived experiences of individuals and communities who face overlapping oppressions (Collins 1991; Crenshaw 1991; hooks 1984). Applied to a study of U.S. cities, an intersectional lens reveals how race, class and gender work together to largely determine which communities have access to capital, desirable real estate and political clout (Peake 1997; Sze 2007). For the purposes of assessing the impact of Climate Action Plans, we are predominately interested in who constitutes the urban, low-income population, as we argue that these communities disproportionately bear the costs of current climate-change prevention strategies. An intersectional approach demonstrates that the urban low-income are a group forged by the overlapping systems of not only class stratification, but also racism and patriarchy. Drawing on this insight allows us to examine differential access to capital as well as the spatial segregation of U.S. cities, both important factors in analyzing the impacts of Climate Action Plans.

Even the earliest U.S. urban sociologists were attentive to the dynamics of race, class and gender, if the latter was given only superficial attention. The Chicago School's human ecology tradition was the first to study the lives of poor Black families and immigrants in the city, assessing households and neighborhoods based, in part, on race and class dimensions. Gender was documented in the form of family structure and maternal obligations (Sweetser 1965; Janson 1980). The ecological approach, useful in

linking the spatial organization of cities to social dynamics, is nevertheless inadequate for conceptualizing the entrenchment of urban inequality. The Chicago School sociologists assumed both the necessity and benevolence of the free market, even if they did not state this outright. They understood the struggles of social groups over access to property as maximizing efficiency and productivity in the urban environment while ensuring the supposed collective interest of "keeping the market system functioning smoothly"(Logan and Molotch 1987: 5-6). Such an analysis dismissed the ways in which certain social groups are structurally denied access and opportunity. For instance, Chicago School figurehead Robert E. Park (1952) suggested that socioeconomic competition in the city placed "every individual and every race into the particular niche where it will meet the least competition and contribute most to the life of the community"(161). This perspective dismisses the devastating ways in which the classism, racism and sexism inherent in U.S. market forces have long locked certain communities into destitute "niches".

Observing that much of the ecological approach is an inadequate framework for examining the links between urban development and an entrenched class structure, Mingione (1981) recommends the infusion of a neo- Marxist, historical materialism in considering urban life. In this conception, social class is not merely a measure of income or wealth, but a delineation of how individuals' and social groups' relate to capital and the means of production. In other words, how people make their money is class stratified and relevant in the urban environment. As an obvious example, when it comes to sustainable urban planning, the capitalist class is able to accrue wealth through investment in new, green technologies and energy efficient property. The working classes

and urban underemployed, on the other hand, depend upon their labor, state assistance, and informal economies to earn an income. Moreover, in the wake of neoliberal restructuring begun in the late 1970s, underpaid and ever more precarious service work has replaced traditional manufacturing jobs, the latter being a sector in which organized labor had much greater political muscle to push for basic working standards. This has meant less potential for upward mobility for lower and working classes, especially in communities of color and for low-income women (Wilson 1987 [1990]). The increase in this more "flexible" and replaceable labor and decrease in relative incomes has widened global divisions between the capitalist class and the working poor.

Harvey (1973 [2009]) uses this Marxist conception of class to delineate how different groups relate to urban space as having use as well as exchange value. Those who own property and rent or sell it to others, such as landlords and realtors, are able to use housing and property "as a means of exchange- housing services are exchanged for money"(Harvey 1973 [2009]: 164). For renters, on the other hand, housing serves predominately as a use value, a place in which to reside. This means that under capitalism, those who *rent* are investing their incomes into the use of their houses as homes without gaining monetary profit or access to capital from this property. In juxtaposition, those who *own* property are able to accrue wealth on that property. Harvey concludes that, for this reason, the nature of property value in urban spaces "[depends] upon the social relationships which individuals, organizations and institutions express in it" (1973[2009]: 166). Whether different groups are able to relate to property as having use or exchange value determines the possibility of earning profit and developing assets.

Of course, class as a relationship to capital is racially segregated, with

communities of color facing generations of asset stripping, barriers in access to property and lower wages (Bayard et al. 1999; Massey and Denton 1993). Scholars have argued that the wealth divide between white communities and people of color is largely due to accumulated assets, not earned income, as Americans hold most of their wealth in their homes (Oliver and Shapiro 1997). For generations, people of color have been excluded from owning property. Today, these obstacles include the practices of redlining, reverse redlining, predatory subprime mortgage lending, and the refusal of insurance companies to protect property in certain residential areas that are populated by people of color (Williams et al. 2005; Squires 2003). Furthermore, studies show that higher income Blacks are also subject to discriminatory lending practices and that, regardless of income, Latinos and Blacks are given higher interest rates on property loans than are whites (National Fair Housing Alliance 2008).

The spatial organization of cities is also both raced and classed. Legacies of subsidized white flight to the suburbs in the aftermath of World War II became part of what Wilson (1987 [1990]) terms a "vicious cycle" of urban change in which affluent white families left city centers, concentrating poverty among people of color in these abandoned sites (see too: Lipsitz 1998). Under the ideology and strategy of urban growth, "decades of runaway sprawl have resulted in a geographically segregated society"(Chen 2007: 299), in which asset poor, inner cities are disproportionately populated by people of color (see too: Noble 2012; Mollenkopf 1983). Industrial restructuring under neoliberalism has also had its most devastating impact on the wages and work opportunities of people of color who have been forced to turn to government assistance and informal economies to make ends meet (Wacquant 2009; Venkatesh 2008; Squires

1994). In so doing, these communities are today over-policed and hyper-incarcerated, with the rate of men of color in prison far exceeding that of whites. For instance, the Sentencing Project reports that, "more than 60% of the people in prison are now racial and ethnic minorities. For Black males in their thirties, 1 in every 10 is in prison or jail on any given day." This clearly has a negative impact on the earning potentials of families of color.

The dynamics of neoliberalism, including the restructuring of the U.S. labor force, the role of the state's safety net, and the spatial organization of the city, also have a distinctly gendered component. Feminist scholars began attending to the spatial isolation of housewives in the suburban home many decades ago (Markusen 1980). More recent intersectional accounts document poor women of color's experiences of city life under neoliberalism. Peake (1997) argues that shifts in employment opportunities, the defunding of public assistance programs, and demographic shifts in households have converged to create the "feminization of poverty" in American cities.[iii] As low paying service work has replaced middle-income jobs, women's per capita income has decreased. Women work longer hours for lower wages. Fewer women have access to a male income as the 1980s marked a growing increase in the number of separations, divorces and extra-marital births while the federal government began systematically dismantling the assistance programs for families and children that single mothers depend upon (Amott 1993). Poverty rates are highest for single-headed families, a fact that is exaggerated for women (DeNavas-Walt, Proctor and Smith 2009). Ellwood (1998) suggests that this is because single mothers face a tripartite barrier: they have less access to high-paying jobs, are more likely than men to rely on state assistance, and are more

likely to be granted, but never receive, child support from their children's fathers.

While women, and specifically mothers, are disproportionately represented among the low-income, an inventory of women's experiences in the city is only relevant when contextualized in terms of both race and class. In fact, being a white woman still confers relative income benefits when assessed in terms of race as, in many cities, white women continue to earn more than men of color (McCall 2000; Browne 1999). Feminist scholars have written about women of color, and their realities at the bottom of the economic ladder, often terming such a phenomena the "double negative" or "multiple disadvantage" (Segura 1989; Hesse-Biber 1986; Beal 1970). When it comes to urban life, including exposure to environmental hazards, women of color certainly face a most acute experience of poverty.

For decades, activists and scholars in the environmental justice tradition have demonstrated that those who face the intersections of racism, classism and sexism bear the brunt of environmental threats. They are the ones most often sited for toxic waste facilities and face the most dire environmental health dangers (Bullard 2005; Chavis and Lee 1987). Because women of color are multiply disadvantaged in urban spaces and most often responsible for the care of children and the elderly (Robeyns 2008; UNDP 2007), they have also been at the forefront of confronting the environmental decay that plagues their neighborhoods and families (Sze 2007; Di Chiro 2006, 2008). However, their voices and action are all but invisible in much of the public discourse informing municipal climate-change policy (Shrader-Frechette 2002). This means that while urban policy-making might have the potential for dismantling environmental injustice if envisioned from an intersectional perspective, today's proposed solutions do not achieve this. Rather,

climate action plans, as a foremost version of municipal efforts to curb climate change, may in fact reproduce and advance environmental *in*justice. We now apply an intersectional assessment of urban wealth inequality to an analysis of three key features in municipal CAPs.

CAPs and the (Re)production of Intersectional Inequalities

Though recent studies conclude that local climate planning does not adequately address social-equity concerns (Douglas et. al. 2012; Finn and McCormick 2011), scholars have yet to examine the notion that CAPs further entrench raced, classed and gendered inequities in wealth. However, in assessing city CAPs across the U.S., it is evident that these programs provide wealth accumulation opportunities for those with access to capital while doing little to ameliorate disinvestment in urban women, communities of color, and the working and underemployed poor. Recent assessments of local government climate action planning have delineated major policy categories typically contained in CAPs (Ramaswami et al. 2012a; Boswell, Greve and Seale 2012; Betsill and Rabe 2010; Boswell, Greve and Seale 2010; Davoudi, Crawford and Mehmoud 2009). We have chosen three of these to examine below: 1) increasing renewable energy generation, 2) decreasing energy consumption by built structures, 3) reducing transportation emissions.[iv]

Increasing Renewable Energy Generation

Increasing the amount of energy generated from renewable sources is typically addressed in CAPs in one of three major ways, all of which are structured in a regressive

manner. In each, large purchasers and those with investment capital are granted opportunities to increase their savings and profits while low-income communities bear disproportionate hardships. A first common way in which this occurs is through the "renewable portfolio standard," a policy that mandates utility companies use more renewable fuels, such as wind or solar energy in order to reduce the GHG emissions that come from burning "dirtier" fuel sources like coal and gas. Renewable portfolio standards have been shown to dramatically increase renewable energy production in multiple parts of the country and, in this sense, effectively curtail climate change emissions at the local level (Ramaswami et al. 2012a). However, such polices are also associated with at least some increase in energy costs for customers (Wiser et al 2005, 2007). Large corporations that consume greater resources are given a kind of wholesale discount, as the more energy a single buyer purchases, the less it has to pay per unit. This is a way in which those with greater capital displace increased energy costs onto smaller scale consumers, such as homeowners and renters. Further, as lower-income Americans spend a higher proportion of their income on energy (Higgins and Lutzenhiser 1995; Lutzenhiser and Hackett 1993), they are the most negatively impacted by the energy rate increases in renewable portfolio standards. While state-funded energy assistance programs have the potential to alleviate these impacts, such programs have been de-funded since the energy crises of the late 1970s. [4]

A second and similar policy tool to increase renewable energy production includes fees and taxes on energy consumption. An example would be a tax placed either

[4] Higgins and Lutzenhiser (1995) offer an excellent history of the decline of federal funding to states supporting low-income energy assistance programs and the attempts to replace these programs with traditional welfare assistance and non-profit or civic organizations.

on energy consumption or a “carbon tax” levied on the volume of emissions generated. Akin to the price increases associated with renewable portfolio standards, these taxation schemes are structured such that big consumers pay less tax per energy unit. Such programs have been used more extensively outside of the United States, where researchers have found that they disproportionately impact those with less wealth. In Denmark, for instance, carbon taxes have been found to be more regressive than other kinds of taxes, such as income and even sales taxes, the latter typically considered to be some of the most regressive (Wier et al 2005).

A third popular means for increasing renewable energy generation provides enticements for producing energy at the building site itself, such as through monetary incentives for property owners that install solar panel roofing. An example of this is the California Solar Initiative, which promises financial benefits for on-site solar energy generation installations on existing residential homes and other kinds of properties (California Public Utilities Commission (CPUC) (CPUC 2012b). This program has been enormously successful by traditional environmental measures, allowing California to become the first state to install more than one gigawatt of customer-generated solar energy (CPUC 2012b). However, of the more than one hundred thousand customers who were able to take advantage of the program in 2011, only 1% of those were families making less than $50,000 in annual income (CPUC 2012b). This meager number of low-income family participation exists despite government gestures at making the program broadly accessible. The Single-Family Affordable Solar Homes (SASH) program was implemented alongside the California Solar Initiative to help include those who could most benefit from cost-saving solar installations in the program. However, the numbers

suggest that SASH's subsidies for low-income families have had little benefit for the low-income and communities of color who wish to take advantage of the California Solar Initiative. While laudable in intention, SASH appears impotent in practice.

Decreasing Energy Consumption by Built Structures

The second major category for climate action planning seeks to reduce the amount of energy consumed by built structures through "green building policies." Green building policies include a range of practices, from improving the quality of building insulation for better temperature regulation to installing roofs that capture rainwater. Green building policies also establish stricter limits for energy use in buildings.

Though green building policies are an exciting area for many environmentalists, in practice they appear to reproduce the classed, gendered and raced dynamics of an already stratified real estate market. Profitable investment opportunities are provided for those who have the capital to purchase new property or invest in upgrades to what is already owned. Meanwhile, increases in the cost of housing are transferred to those who do not own their homes in the form of increased rental pricing. This further strips the assets of those who do not yet own as they are forced to spend a growing percentage of their income on housing that is not accruing equity while contributing less to personal savings in the hope of future ownership.[v]

Green building measures can be implemented either in the form of new construction or as retrofits to existing buildings. This translates into up-front costs for developers and owners but significant long-term savings because of the decrease in energy expenditures. As one indicator of the financial benefits of green construction, the

2013 Building Energy Efficiency Standards in California are predicted to increase the cost of constructing a new home by $2,290 (CEC 2012). However, homeowners are expected to save triple this amount over a 30-year mortgage. On the other hand, rents increase as property owners are able to displace increased costs on renters. If renters could see some monetary benefit in decreased utilities expenditures, these are still cowed by the cost of increased rents. The fact that energy efficiency standards increase rental prices for commercial real estate is well established and is a point used to tout the 'business friendly' nature of these policies (Fuerst and McAllister 2011). Thus, these kinds of energy saving mandates benefit those who own housing while transferring cost increases to those who have lesser means for accruing wealth through home-ownership. This inequity is not merely an unfortunate arrangement of the financial system but actually a wealth generator for those who own property.

There are further barriers for low-income communities in seeing the financial benefits of making their homes more energy efficient. Even in cities and towns where energy efficiency measures for homes are not mandatory, but rather voluntary or subsidized, those without wealth are often unable to access capital to make energy cost saving retrofits due to economic status or lack of "credit worthiness" (Golove & Eto 1996). Again, while government assistance and grant programs could alleviate this inequity if aggressively implemented, such have been downsized over time, and receive little political support in today's budget constrained economy.

Reducing Transportation Emissions

A final and rather immense category of CAPs include a range of programs aimed

at decreasing vehicle miles traveled (VMT) as a way to reduce greenhouse gas emissions from modes of transportation. There are two major ways in which this is done. At the micro-structural level, there are taxes or pricing schemes that raise the cost of driving and fuel consumption as a means for deterring excessive automobile transport. At the macro-structural level, there is the redesign of urban space for maximum transportation efficiency. We treat these in order.

1. Pricing Schemes

There are a few ways in which CAPs propose to raise the cost of automobile travel. A first is through fuel taxes, which in the United States are actually quite low when compared to European countries. For this reason, U.S. environmentalists and sympathetic politicians often see further increases to fuel taxes as an attractive revenue stream for funding climate-oriented projects. A second mechanism for raising the cost of automobile travel can be found in the so-called "congestion tax", a fee required to drive in major urban areas during certain times of day. Such a fee was implemented in London, and, New York City's Mayor Michael Bloomberg unsuccessfully pursued a similar program in his metropolitan area.[vi] A third emerging trend for increasing the cost of traditional automobile travel is offering incentives for hybrid or electric vehicle owners, such as preferential parking or highway lanes.

The problem the first two techniques for raising the cost of automobile travel is that, similar to other taxation or cost increase proposals in CAPs, these measures are regressive. The low-income spend a greater proportion of their income on energy costs, not only for the home but also in the form of gasoline for vehicles (Lutzenhiser &

Hackett 1993). Thus fuel and congestion taxes impact the low-income more than they affect those with greater wealth (Sevigny 1998). In terms of the third kind of policies that benefit the owners of non-traditional automobiles, these again benefit those with greater disposable incomes while neglecting the transportation needs of the working classes, people of color and women. Of course, better parking spots or highway lanes are only the tip of the iceberg. Hybrid and electric vehicles are but another green technology that benefits those with access to capital. As they are more expensive than traditional vehicles, hybrid and electric cars require a high upfront cost. For instance, the 2012 Toyota Prius hybrid costs 50% more, and the 2012 Chevrolet Volt, an electric car, costs twice as much as the comparably sized, traditional fuel 2012 Toyota Matrix.[vii] Beyond the ethical incentive to pay higher prices for an environmentally friendly vehicle, hybrid and electric cars come with the promise of significant savings in fuel prices over time. However, these advanced, energy-efficient vehicles offer little for those with limited resources.

2. Land Use Policy

The organization of urban space through different land use policy is another manner of reducing emissions from the transportation sector. Distinct from policies intended to raise the cost of car travel, we understand the emerging category of "transit-oriented development" (TOD) generally found in CAPs to be a more macro-structural solution. That is, these policy measures have the potential to remedy legacies of raced, classed and gendered spatial segregation in U.S. cities. Transit-oriented-development locates high density, mixed-use urban space close to low-cost, public transportation, such

as light rails or major bus routes. These mixed-use developments incorporate a diversity of residential and commercial zones, allowing housing, employment, and retail opportunities to be positioned closely together (Boarnet and Compin 1999).

The environmentally savvy organization of urban space holds great possibilities for meaningfully addressing equity issues. Community leaders have argued that transit-oriented development could actually benefit low-income communities the most because of its dramatic potential to reduce transportations costs (Belzer and Poticha 2009). For instance, while not attending to distinctions based on race, class or gender, the Center for Transit-Oriented Development nevertheless predicts that families residing in "transit rich neighborhoods" will spend less than a tenth of their income on transportation. This is in comparison to families in automobile dependent neighborhoods who spend an entire quarter of their income on transportation (Belzer and Poticha 2009).

The problem is that these projects are rarely implemented in a manner that integrates low-income communities into policy considerations or the planning process itself (Wood and Brooks 2009). There are a few reasons for this. First, transit-oriented development is a relatively new way of arranging urban space. Historically, U.S. policy has encouraged home ownership, especially for white families, as a means for wealth accrual (Wilson 1996). However, providing a house and land for each nuclear family has long meant pushing sectors of the population into the suburbs, far away from most public transport (Markusen 1980). Transportation oriented development intends to achieve the opposite of the sprawling urban spaces that these earlier policies encouraged. Thus, because it is in many ways working against the historical gradient by which U.S. cities have been organized, urban densification is still seen as experimental by many in the

private and public sector.

As a specialty area of real estate considered by many to be financially risky, those with surplus capital are the ones investing in, and hence envisioning the design of, transit-oriented development. At the very least, this raises concerns regarding procedural equity, as the middle and certainly lower-income are rarely part of planning these new communities (Belzer and Poticha 2009). The state's role in promoting transit-oriented development by incentivizing the private sector through tax credits further presupposes that those with wealth will be the ones to guide and benefit from transit-oriented development.

Evidence also suggests that when it comes to transit-oriented development, new construction is prioritized over the preservation of already existing neighborhoods (Belzer and Poticha 2009). As transit-oriented development becomes more and more financially attractive for developers, the affordable housing that does exist near transportation hubs is endangered. For instance, a 2008 report found that contracts on nearly two thirds of the privately-owned, subsidized housing within walking distance of public transportation in U.S. cities were to expire in five years. At this point, private owners "may choose to opt out of the [affordable housing] program to capitalize on higher demand and market values" (National Housing Trust and Reconnecting America 2008: 3). As a case in point, in the San Francisco Bay Area, affordable housing is increasingly being pushed away from low-cost transportation towards the periphery of the city (Chapple, Spade and Lester 2007). Thus, in practice, those with investment capital control the burgeoning arena of transit-oriented development while low-income communities, including people of color and single mother-led households, have little say.

There is a further concern regarding the equity provisions of TOD. A number of studies have demonstrated that without a substantial expansion of public transport in nearly every major city of the nation, low-income communities cannot benefit much from these transportation opportunities even if they can afford nearby housing. This is because much of the low-wage and entry-level positions in which these communities are employed are not accessible via current public transportation arrangements (Coulton, Verma, and Shengyang 1996). Moreover, those receiving state assistance, disproportionately low-income women, are often forced to juggle geographically disperse, entry-level, shift work with child-care, education and state-mandated job training. Lacking reliable and accessible public transportation, society's most vulnerable risk being late to or absent from their various state-mandated obligations, which can result in serious penalties (Chen 2007: 301).

Thus, TOD has created a bit of a paradox for those with little wealth. Housing closer to low cost transportation has become prime real estate, forcing the lower income further away from public transport to where housing is affordable. At the same time, in the absence of adequate public transport, low-income households face longer commute times and fuel costs, washing out any intended savings in housing costs. A recent study (Haas et al. 2006) demonstrates that lower-income households are constantly budgeting transportation against housing expenditures. Averaging expenses across 28 metropolitan areas in the United States, the study finds that for the wealthy urban-dweller, earning between $100-250,000 annually, only 22% of annual income is spent on housing and transportation combined. For those making $35,000-50,000 a year this total expenditure jumps to 39%. Making less than $20,000 a year means affording housing and

transportation is, in fact, impossible. Those in this bracket spend 115% of their income, more than they have, on transportation and housing alone.

The challenges the low-income face in making ends meet is not alleviated by the current model of transit-oriented development. The private housing market and lack of equitable state investment in public transportation cannot provide affordable housing and reliable mobility without significantly transforming the policies and built infrastructure currently in place. Of course, land use patterns and social inequity predate the concept of climate action planning. Nevertheless, as long as CAPs do not implement consequential incentives for developers to create affordable housing in conjunction with government investments in expanded public transportation that serves the needs of the low-income, current divisions in urban wealth and property ownership are only exacerbated. However, a broader question remains as to whether incorporating such equity provisions into CAPs would be enough to make a difference.

Conclusion

In our analysis we have shed light on some of the current inequities inherent in climate action planning. At best, sub-national climate action plans can help reduce the green house gas emissions generated by cities as a meaningful pathway towards addressing climate change. On the other hand, CAPs appear to be the latest incarnation of urban policies that deepen inequality along gendered, raced and classed lines. CAPs often deploy regressive pricing structures. They benefit those who own property and have access to investment capital while shifting the costs of technological advancements and energy savings onto the poor. As women, communities of color and the urban

underemployed and working classes have less access to capital and property ownership, they are sometimes merely left out of the financial benefits that other communities receive. More often, those who face the intersecting oppressions of racism, sexism and classism are in fact further disadvantaged by climate action policies. Sadly, the few programs, that have acknowledged this and sought to take steps to allow the low-income to participate in environmentally beneficial practices, such as the Single-Family Affordable Solar Homes program, have proven largely ineffective.

The argument that all social policies are structured in dominance and, therefore, less likely to help the poor and powerless is hardly novel. However, when economic inequality becomes an immediate threat to the health of the planet and entire populations, as is true in the case of climate change, it becomes a collective concern in ways that other social issues may not be. For this reason, climate change policies should be analyzed and addressed as distinct from other social betterment programs.[viii]

We argue that CAPs are front and center in the urban equity dilemma. It is beyond the scope of this paper to assess whether the CAP, forged in the classical urban planning tradition and leveraged on a bedrock of neoliberalism, is capable of overcoming the raced, gendered and classed inequities that plague our cities. It does seem, however, that small assistance programs for households and incentives for private developers have been insufficient to counter legacies of social injustice. If we are to begin to make the emission reductions necessary to address climate change, a fundamental transition to a more redistributive economy, especially as it relates to household energy expenditures, may be required. Indeed, creating a climate action agenda that simultaneously addresses environmental destruction while dismantling the raced, gendered and classed axes of

exclusion and disadvantage in American cities may be the only environmentally just option.

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[i] Many scholars have pointed out the impossibility of the capitalist ethos that promises perpetual economic growth. On a planet with finite space, resources and resiliency, continual development, even if it is green, is not merely stratifying. It is also built upon a flawed premise. See Noble (2012) for a more complete discussion.

[ii] See Bulkeley and Betsill (2003) or Betsill & Rabe (2009) for an excellent history of the early years of U.S. municipal climate policy.

[iii] See Pearce (1978) for an earlier examination of the concept "feminization of poverty."

[iv] Other major areas addressed in CAPs are water and waste reduction. While important for comprehensive sustainability planning, they are not usually the major features of CAPs. For this reason we do not include them in our analysis.

[v] See Harvey (1973 [2009]) for a critical assessment of the city as a nexus for reproducing income inequality through property ownership under neoliberal capitalism. In later work, Harvey (2012) also discusses "the monopoly power of private owners"(90) over the housing that renters require for their living needs.

[vi] While the congestion tax was recommended in an initial version of PlaNYC, an economic and climate change mitigation plan launched by Mayor Bloomberg in 2007, it never went to a vote at the State Assembly because it lacked the political support to get it there.

[vii] These calculations are based on a cost comparison of these three automobiles at www.toyota.com.

[viii] We are grateful to George Lipsitz for making this astute observation and helping us to hone our analysis.