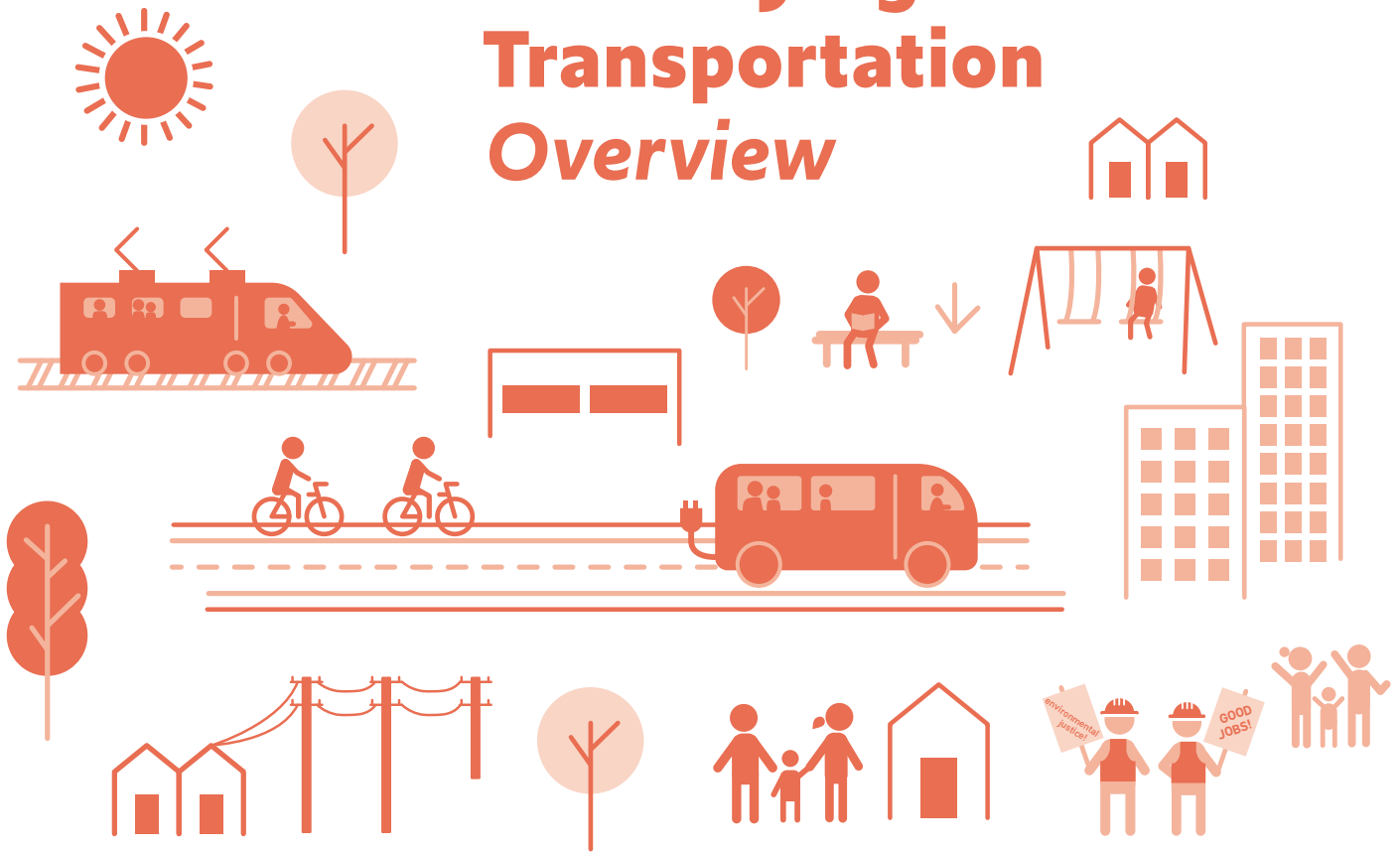


Policy Brief:

Electrifying Transportation Overview



As the electrical grid transitions off fossil fuels, renewable energy can and must power our transportation systems. This transition should not be narrowly conceived as simply getting more personal electric vehicles (EV's) on the road; instead, it should be thought of as a broader transformation of our transportation systems to address decades of inequitable, unhealthy and unsustainable planning.

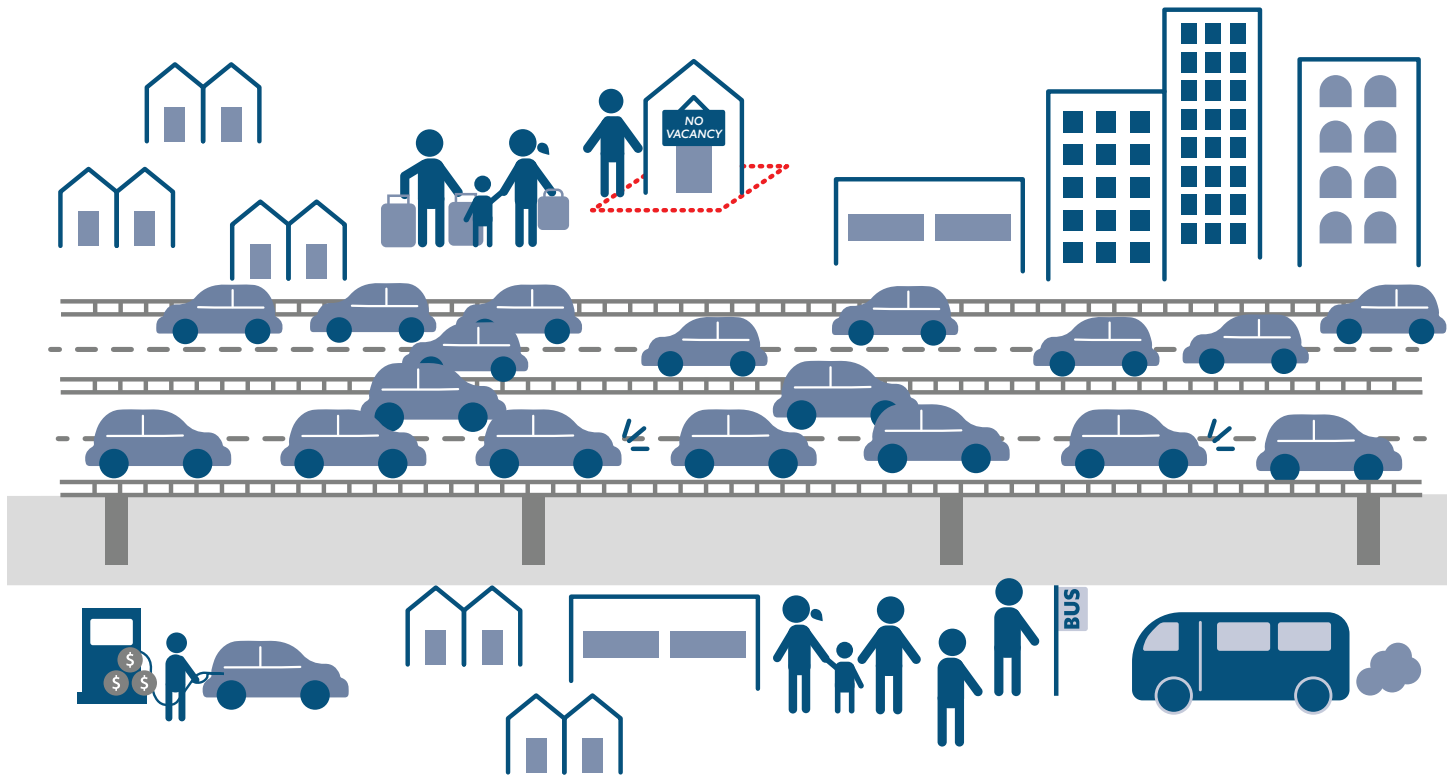
As seen through an equity lens electrifying transportation is situated in a broader framework of *transportation justice*. Transportation justice is the right of all people to affordable, accessible and clean transportation opportunities. This includes massively expanded public transit systems across the country, innovative ridesharing options for urban and rural communities, and personal vehicles. Achieving transportation justice also means fundamentally reshaping how communities, neighborhoods, and cities are planned. It means scaling back on car dependency while re-prioritizing clean, publicly funded transportation that can functionally and affordably transport millions of people from their homes to their workplaces be they offices or orchards.

Transportation justice has many interactions with Land Use and Air Quality issues as well. We hope to discuss more of these intersections in future briefs. This series, however, will narrowly focus on expanding and creating a fossil-fuel free transportation system and mobility.

THE Climate +
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Transportation Inequality



How did we get here?

Inequitable transportation planning profoundly shapes the quality of life, health, economic and social opportunities for low-income communities and communities of color across the U.S.

Throughout the 1950's and 1960's, the U.S. federal government invested heavily in expanding highway construction and ushering in an era of land-use planning that **promoted dependency on personal vehicles and highly resource intensive suburban development.** Often highways were built right through thriving low-income communities and communities of color, resulting in demolition of homes and businesses and general devastation of community coherence.³ Simultaneously, people of color faced discriminatory housing and lending policies that dictated where they could and could not live, through practices such as "red-lining." **Often restricted to specific neighborhoods near polluting facilities, discrimination in provision of local services perpetuated a lack of affordable, accessible transportation options and further isolated communities of color.**

Transportation Inequality Today

The toxic mix of vehicle-focused federal transportation policy, unsustainable land-use planning, and racism have significant equity and climate impacts today. Homes, jobs, services, community institutions, and transportation are overwhelmingly not located near each other, leading to increased dependency on cars and related greenhouse gas emissions. The dominant model of suburban sprawl is highly carbon intensive.⁴

Unfortunately, our public transit systems are in disarray; the American Civil Society of Engineers gives our public transit systems a grade of D-, with a \$90 billion backlog in overdue maintenance.⁵ Many low-income communities face gaps in service that make work commuting difficult, or live in areas that are not serviced by regular public transit routes. **Meanwhile, 80% of all federal transportation dollars go to roads, with only 20% funding public transportation.**⁶



Car Access

Even as American communities have become more car dependent, disparities in access to cars have remained; as of 2015, **6.7% of white households lacked a car, versus 19.7% of Black households, 12% of Latino households, and 14.9% of people of color households overall.**⁷

Not surprisingly, people of color, low-income households and renters are all more likely to use public transit,⁸ and Blacks, Latino and Asian people all rely more heavily on public transit than whites.⁹ Lower income and working-class households use transit far more than upper income Americans, and lower-income households are also less likely to own a car.¹⁰ **People of color are also more likely to rely on public transit specifically to get to work;** Latino workers are almost 3 times as likely, and Asian-American and African-American workers are almost 4 times as likely as white workers to commute by public transit, and workers of color who commute by public transit are more likely than white public-transit commuters to have long commutes of 60 minutes or more.¹¹

Health

Poor transportation planning impacts everything from health to economic opportunities to social cohesion. Transportation-poor places have fewer opportunities for physical activity, which has a host of negative health impacts, including increased risks of obesity and heart disease, as well as higher rates of vehicle-related injuries and fatalities. Long commutes and the overall isolation of many suburbs also increase mental health challenges.¹²

And exposure to vehicle related emissions causes a range of public health issues, including cancer, heart disease and respiratory issues.

Social Mobility and Personal Finances

Transportation inequality has direct financial impacts as well. The average American family spends 20% of its monthly budget on transportation, but this can be as high as 30% for low-income households.¹³ Because adequate transportation is so critical to getting to work on time, multiple studies have also documented the **link between lack of transportation and lack of economic mobility, including higher unemployment and lower incomes in transportation poor areas.**¹⁴

If planned with equity and sustainability, a complete transformation of our transportation systems from one based on fossil-fuels, which perpetuates patterns of inequality, to one based on renewable energy and creating access to economic opportunity and increased well-being for millions of low-income communities and communities of color.

3. <https://www.racialequitytools.org/resourcefiles/sanchez-moving-to-equity-transportation-policies.pdf>
4. <https://news.berkeley.edu/2014/01/06/suburban-sprawl-cancels-carbon-footprint-savings-of-dense-urban-cores/>
5. <https://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Transit-Final.pdf>
6. <https://www.racialequitytools.org/resourcefiles/sanchez-moving-to-equity-transportation-policies.pdf>
7. https://nationalequityatlas.org/indicators/Car_access
8. https://www.northeastern.edu/csshresearch/dukakiscenter/wp-content/uploads/sites/7/2018/03/TRN_Equity_final.pdf
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11. <https://www.demos.org/sites/default/files/publications/Public%20Transit.pdf>
12. [https://www.ajpmonline.org/article/S0749-3797\(08\)00682-X/fulltext](https://www.ajpmonline.org/article/S0749-3797(08)00682-X/fulltext)
13. <https://aceee.org/blog/2016/07/america-s-transportation-energy>
14. <https://www.theatlantic.com/business/archive/2015/05/stranded-how-americas-failing-public-transportation-increases-inequality/393419/>

BIPOC: Black, Indigenous, and People of Color will be used throughout the series to emphasize the disproportionate amount of hardships Black and Indigenous people have and continue to face in the United States.

Fleet: A group of vehicles that operate together under the same ownership. For example, school buses owned and operated by a school district, cars owned and used by local governments, trucks used by companies to move goods.

Personal Electric Vehicles:

The umbrella term used for both plug-in hybrid and battery electric vehicles used by people for their personal mobility needs such as getting to work, going to the grocery store, etc. Throughout this series, we will be using EVs to describe personal electric vehicles.

Redlining: Historical discriminatory housing and lending policies that dictated that often resulted in the exclusion of poor and minority populations from certain geographies that was dominant in the 1950's and 1960's.

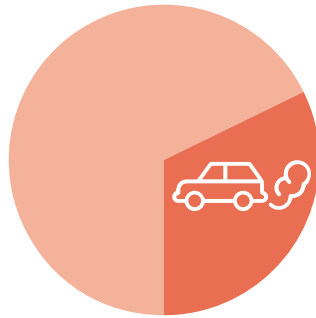
Transportation Justice:

The right of all people to affordable, accessible, healthful, and clean transportation opportunities.

Vehicle Miles Traveled (VMT):

A metric used to describe how much cars are being driven by a population. It is often calculated as a per capita number by dividing total annual miles of vehicle travel in a geography by the total population of the geography.

Snapshot of electrifying transportation nationwide



Nationwide, transportation is the single largest source of GHG emissions, contributing **29% of total GHG emissions.**



90% of all fuel used in the country is fossil-fuel based.¹



Emissions from the transportation sector has also experienced the **most absolute growth.**²

We simply will not be able to stop climate change if we do not rapidly reduce transportation emissions.

¹. <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

². <https://www.epa.gov/transportation-air-pollution-and-climate-change/carbon-pollution-transportation>

If planned with equity and sustainability, a complete transformation of our transportation systems from one based on fossil-fuels, which perpetuates patterns of inequality, to one based on renewable energy and creating access to economic opportunity and increased well-being for millions of low-income communities and communities of color.

As we start to reimagine our transportation system, barriers for BIPOC and low-income communities must be addressed along with additional obstacles such as funding and how electrification policies have been created and decided upon until now. This will be discussed in further detail in the **Barriers** brief in this series. Equitable policy solutions must address these decades of inequality our current transportation system has placed on low-income communities and communities of color. The **Solutions** brief in this series explores some of the many possible solutions to consider with this idea in mind.