

Our Cities Need Fewer Cars, Not Cleaner Cars

Electric cars won't eradicate gridlocks and air pollution, but carbon footprints could be cut by favoring pedestrians, cyclists and mass transit



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The specter of our cities choking with unhealthy air has prompted numerous governments to mandate a transition to electric cars. Their concerns are well founded, even if their proposals fall short of what is needed.

Over the past four decades, cars have become far less polluting. Their fuel efficiency has practically doubled and their tailpipe emissions have been reduced by more than 95%. Yet cities such as London and Paris are still battling smog and pollution. California has for decades demanded the toughest emission standards in the US, and yet Los Angeles heads the list of US cities for bad air quality. Moving to all-electric car fleets will be a positive step, albeit an inadequate measure.

Our urban mobility architecture will have to undergo fundamental change. In Boston, more than 40% of cars in rush-hour traffic have only one occupant. We envelop each occupant, weighing an average of 70-80kg (11-13st), in a package that weighs 20 times their weight to achieve mobility. It takes a lot of energy to move that mass.

Even considering the far greater efficiency of an electric vehicle, zero tailpipe emissions does not mean zero carbon emissions for the travel. Today over 50% of the electricity generated in the UK and over 65% of electricity generated in the US comes from fossil fuels. Our carbon footprint will improve by barely a quarter if we all switch to electric vehicles.

And there are other aspects to be concerned about. We currently demand considerable amounts of valuable urban land for roads. London allocates almost 24% of its land area to roads and supporting infrastructure. In many US cities this can be as high as 40%.

The World Health Organization has estimated that a city needs to allocate at least nine square meters of green space for each resident. Yet many fast-growing cities around the world are making do with less than two square meters after allocation of ever more precious land to feed the insatiable appetite for roads and parking.

These serve as invisible subsidies to car users even as public transport systems face hostile scrutiny of their more visible finances. A World Bank study points out that most surface streets and main roads in urban areas are underpriced, even after the taxes imposed on fuel sales are considered.

And, it appears, even this does not solve the problem. As Los Angeles, which offers more road capacity per capita than any other large US city, has discovered, adding roads and highways merely encourages more people to use private transport modes. The average Los Angeles commuter wastes almost 5.5 days each year paralyzed in gridlock. Traffic congestion is also a growing economic burden for most cities. A study in India has determined that traffic congestion can account for erosion of almost 3% of GDP for the sprawling New Delhi metropolitan region.

In other words, the rush to cleaner cars alone will not solve the problems cities are grappling with. Rather, cities need far fewer cars and should support a wide variety of modes favoring pedestrians, cyclists and mass transit or shared mobility.

New York City, where, per capita, car ownership is half the US average, has half the overall carbon footprint per person of Los Angeles. The transportation component of this total per capita carbon footprint for NYC is a quarter that of the Los Angeles resident.

In order to get people out of cars, cities also need to make it easier for people to connect between different transport modes. Behavioral studies have shown that commuters will switch routes and modes if better options are available.

Above all, city administrators are recognizing the importance of governance for improving mobility efficiency. Regulations that manage parking capacity or city center driving restrictions, coupled with financial and non-financial interventions, are increasingly used to motivate commuters to gravitate towards modes of travel aligned to societal goals. These range from

incentives for higher occupancy vehicles, favorable access to roads and parking spaces for low environmental impact vehicles, and incentivizing last-mile connections to improve the viability of mass transit.

We all want our cities to be faster, smarter and greener – and the car is not the only answer. We must use technology and entrepreneurship to ensure that our urban future is fair, inclusive and aligned with the common good.

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<https://www.theguardian.com/environment/2017/oct/16/our-cities-need-fewer-cars-not-cleaner-cars-electric-green-transport>