

Freeing the Climate: Environmental Benefits of Eliminating Transit Fares

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In addition to being more [efficient](#) and [equitable](#), eliminating bus fares would benefit the climate. The transportation sector is the biggest and fastest-growing source of greenhouse gas emissions in Massachusetts, and personal vehicles are responsible for the majority of those emissions. Transportation accounted for 42 percent of greenhouse gas emissions in Massachusetts in 2017, the latest year with official data. The Commonwealth has made specific commitments to reduce emissions from transportation, specifically in its new “Next Generation Climate Roadmap” law and the Governor’s Transportation and Climate Initiative. Eliminating transit fares can be part of achieving those goals. The Commonwealth’s Decarbonization Roadmap likewise lists “low cost or free transit” as one of the strategies available to reduce emissions.



Eliminating fares on buses helps reduce greenhouse gas emissions in several ways. First of all, reducing fares encourages people to ride public transportation instead of driving. Public transit reduces emissions more when more people choose to ride transit rather than drive. Even with less than 30 percent of its seats full, a typical bus emits a third less greenhouse gas emissions per passenger mile than the average single-occupancy U.S. vehicle.¹ A fuller bus can replace more automobiles on the road than one which is relatively empty.

Bus riders may be particularly sensitive to fare costs when making travel choices because these travelers tend to have lower-than-average incomes. An MIT [experiment](#) on the MBTA that reduced fares in half for a set of low-income Supplemental Nutritional Assistance Program (SNAP) recipients found they took almost 30 percent more transit trips than a control group. There are additional, less direct ways that eliminating fares reduces climate emissions.

- Eliminating fares enables a bus to complete a trip in less time by reducing the time it takes for people to board and disembark. This reduces idling and cuts the time that a bus engine runs to complete a trip.
- Eliminating fares can also encourage people not to purchase a vehicle, or for a household to own one car instead of two. Without a prior commitment to the fixed cost of vehicle ownership, people are more likely to make choices that reduce the length and frequency of driving trips if they aren't already paying for a vehicle that will stand idle if they ride transit. Somebody paying for a taxi, for example, is more likely to choose a closer location or to consolidate multiple trips into one.
- Lastly, fare-free transit can encourage transit-oriented development and compact land use patterns which reduce emissions. Fare-free transit would encourage employers, store owners, and real estate developers to locate near transit stations, and future workers, shoppers, and residents would have less need to drive long distances in their daily lives. Similarly, the more people ride transit, the less space will be used for parking, leaving potentially more open space, and improving options for walking and biking.

If Massachusetts is going to reduce transportation climate emissions, there will need to be a significant shift away from travel in personal automobiles. Fare-free buses and other public transit can be part of that solution.

Endnotes

¹ U.S. Dept. of Transportation, Federal Transit Administration, "[Public Transportation's Role in Responding to Climate Change](#)" (Jan. 2010).