



COMMUNITY CLIMATE
COLLABORATIVE

Zero-Emission Buses Move Us Towards a More Equitable and Sustainable Future for All

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As communities across the country look to mitigate the impacts of climate change in their communities, the transportation sector has become a key area for change and transformation. In the United States, the transportation sector accounts for approximately 30% of all GHG emissions, negatively impacting human and non-human health.¹ In Charlottesville, our community is facing the same issue. The City Council is gearing up to vote on an alternative fuel choice for its transit system. This choice will lock us into infrastructural, environmental, and financial commitments that will impact us for decades.

The Community Climate Collaborative's (C3) recent report² on alternative fuel options found that zero-emission buses (ZEBs), particularly battery electric buses, provide the healthiest and most cost-effective option for Cville. Investing in ZEBs means fewer internal combustion engine (ICE) vehicles on the road, less GHG emissions, and more mobility overall. Transportation should be free, accessible, and positively impact human and non-human health. Studies have shown that traffic-related air pollution is associated with dementia, asthma, heart problems, strokes, lung cancer, and premature death.³ In the US, racial minorities and lower-income people are at a higher risk of death from exposure to PM2.5 and often bear the brunt of pollution impacts.⁴ Electrifying buses has direct impacts on human health and protects those who use them the most. While battery electric buses, for example, cost more than diesel buses upfront, the amount of money saved on fuel costs (cost of diesel or CNG vs. cost of electricity) and yearly

¹ Environmental Protection Agency (2023). "Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990–2021." Available at:

<https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>.

² Community Climate Collaborative (2023). "Alternative Fuels for Transit Buses: What's the Best Option For Your Transit Agency?" Available at:

<https://static1.squarespace.com/static/5a0c67f5f09ca475c85d7686/t/6516dd9513522c6c64036769/1695997350359/C3+-Alternative+Fuel+Buses+-+final.pdf>.

³ American Lung Association (2023), "Driving to Clean Air: Health Benefits of Zero-Emission Cars and Electricity." Available at

<https://www.lung.org/getmedia/9e9947ea-d4a6-476c-9c78-ccc7d49ffe2/ala-driving-to-clean-air-report.pdf>, p.2.

⁴ Jbaily, A., Zhou, X., Liu, J. et al (2022). "Air pollution exposure disparities across US population and income groups." *Nature* 601, 228–233.

maintenance offsets their higher cost by a significant margin.⁵ The pay-off is huge, not only for Cville residents but for all people impacted by climate change.

Charlottesville has the potential to be a leading city in green transportation and infrastructure, shifting away from fossil fuels to meet its climate goals and secure a more sustainable future for all. To achieve this, Charlottesville must vote in favor of zero-emission buses.

⁵ Aber, J. (2016). "Electric Bus Analysis for New York City Transit." *Columbia University and NYC Transit Authority*, accessed 2 September 2023. Online at: <http://www.columbia.edu/~ja3041/Electric%20Bus%20Analysis%20for%20NYC%20Transit%20by%20J%20Aber%20Columbia%20University%20-%20May%202016.pdf>.