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The Zero-Emission School Bus Mandate: Changes, Challenges, and Resistance in Rural New York State

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Abstract

A divisive legislative mandate presented an impending deadline to meet zero-emission transportation for student busing in New York State. Though lauded as a progressive environmental measure, this directive proved to lack public support, be a challenge to the infrastructure of rural towns, and threatened the financial solvency of rural school districts. This situation required a repositioning of school transportation as part of the rural infrastructure and demonstrated the need for local voices to counter broad-strokes legislation, with particular attention to the unique needs of rural places.

Keywords: *zero-emission, rural infrastructure, student transportation, finance, taxpayers, rural advocacy*

Background

In her first State of the State address (Buffalo Toronto Public Media, 2022), New York Governor Kathy Hochul announced a series of sweeping environmentally minded reforms. These proclamations aligned with the New York State Climate Leadership and Community Protection Act (§ S6955), which aimed "*to put the state on a path to reduce statewide greenhouse gas emissions by eighty-five percent by two thousand fifty and net zero emissions in all sectors of the economy*" (2019, p. 8). In response, New York initiated changes to student transportation policy, impacting the 50,000 school buses that operated throughout the state (New York State Education Department, 2022). All new school buses purchased after 2027 must be zero-emission vehicles and entire school bus fleets must be composed of fully zero-emission vehicles by 2035, according to the New York State Energy Research and Development Authority (2023; 2025).

The distinct needs of rural places around the globe tend to be sacrificed for the more publicised needs of nearby metropolitan areas. Voices of advocacy for rural areas of New York, often referred to as Upstate, are drowned out by larger urban political forces in the state, namely, New York City. As a former rural school principal in Upstate New York, I took part in speculative conversations in my district when the zero-emission mandate was first introduced. I have witnessed the progression of this policy and now, from a higher education vantage point in Upstate, I note that this is not a singular narrative. This distinct policy wave serves as a real-time case study of metrocentric legislation ignoring the realities of rural contexts.

In this essay, I argue that this piece of metrocentric legislation demonstrates a misunderstanding and ignoring of the realities of daily life in rural places, resulting in a "*spatial and locational discrimination*" (Soja, 2009, p. 3). First, I will detail the significant challenges of implementation in rural Upstate, then will conclude with the implications of this for rural places. In the name of

'progress', urban-minded lawmakers generate policy without knowing or caring about the realities of rural life, particularly those facing school districts.

Key Challenges to Implementation

School transportation is part of rural infrastructure. Without this form of transportation, more than two million students would not be able to access their education (New York School Bus Contractors Association, 2025). Localised, nuanced solutions that take into account the realities of the infrastructure, as well as financial costs, are needed to address the transportation challenges in rural schools. Geography, climate, weather conditions, and access to metropolitan infrastructure shape life in rural places.

In rural New York, extreme winter weather, the large size of school districts, and the electric grid present barriers to fulfilling this mandate. Upstate weather requires rugged and reliable vehicles; there are concerns about the durability and power of electric school buses in the cold (Charette, 2025). In the Adirondack Mountains of New York State, some school districts encompass more than 500 square miles (Keeler, 2023). Furthermore, as I learned while serving as an administrator, small rural roads often have weight restrictions, requiring districts to have a uniquely sized school bus to accommodate isolated locations (DeYoung & Howley, 1992). Here, in these expansive districts, "*where unique road attributes may be known only by members of the local community*" (Ripplinger, 2004, p. 105), technological busing models, which automate routing for maximum efficiency, are not superior to the knowledge of the ones who drive school buses on these roads every day, year after year. One district learned that recharging the buses was not feasible on the electric grid run by their town's independent electric company (Byrne, 2023). Charging the buses would virtually destroy the electric infrastructure of the region; they did not have the capacity to accommodate these buses. Even if they were able to be charged, one school official commented that "*some of our bus runs are longer than the actual mileage you get on a charge*" (Chudzinski, 2024).

Environmental consciousness comes at a price that is difficult for rural communities to pay. New York State's plethora of financial incentives and rebates have made fleet electrification an enticing option for some schools. One community was given federal grant monies to assist with the purchase of zero or low emission school buses (Mid-Hudson News Staff, 2023). The community voted to reject the $1.2 million federal grant for electric buses (Byrne, 2023). This story was echoed throughout the state. In 2024, 10 of the 31 school districts voting on purchasing electric school buses rejected the measure (Fortis, 2024). It is important to note that in many areas of the state, rejections outpaced approvals of zero-emission vehicle when put to taxpayer votes (Carr, 2025). Though New York requires taxpayer approval for significant expenditures, such as electric buses, the reception of the zero-emission mandate has been a source of tension for schools in all contexts. A suburban district received $3.4 million in grant money for the purchase of 17 electric buses in May 2024 (Gross, 2024). Six months later, taxpayers rejected this grant (Bender, 2024). In another suburban community, proponents assumed that nearby residents welcomed the quiet hum of zero-emissions buses versus hearing "*loud diesel engines*" (James, 2025, para. 4) early in the morning. In densely populated neighbourhoods, quiet motors are certainly appreciated, but in a rural farming community, does the mere sound of an engine warrant a complete overhaul of transportation? The school district's only remark to the public concerned the bus engine's volume—nothing more. Still, advocacy groups encourage the public to put pressure on school districts to support and "*reimagine this classic form of student transportation*" (Niccolini, 2024, para. 1) citing student health and environmental concerns related to traditional busing. What suburban districts cite as benefits of zero emissions vehicles do not align with the realities of rural districts.

The financial price associated with upgrading existing infrastructure is another burden on rural places. Most rural school districts in New York State have a bus garage, a large building on school

district property that houses all the vehicles. This arrangement could become obsolete as buses may have to be charged elsewhere in a facility that can accommodate the electrical requirements for charging a fleet. The state government acknowledged that 15% of the state's public school facilities cannot support this requirement while also mentioning that existing busing facilities will need upgrades to fully meet the demands of an electrified fleet (New York State Department of Public Service, 2024). The state government passed responsibility for these building upgrades (which may or may not be accomplished with additional funding granted by the government) to the local schools, instructing them to talk to their local utility provider for more information (New York State Department of Public Service, 2024, slide 36). While this zero-emissions mandate is not entirely unfunded, it is certainly one which strains the already stretched capacities of rural school districts and, in many rural areas, the locally owned and operated power company. One out-of-the-box solution connected to this mandate involved industry. A bus manufacturer was planning to relocate and build a hydrogen production facility, steering one district toward hydrogen-cell buses (Doran, 2024; Moriarity, 2024). However, the company decided against relocation (Chudzinski, 2025), leaving this school district still to answer the question of how they will approach the zero-emission mandate.

Conclusion

Rural school communities in Upstate New York are stuck between environmental mandates and inequitable realities. This is an example where a "*rural critical policy analysis must recognize that the metrocentric advantage has been leveraged by the consistent framing of rurality as invisible and/or deficient*" (Brenner, 2021, p. 37). Concerns over weather and a lack of shared decision making as demonstrated by rejection of bus propositions, demonstrate an invisibility of rural concerns. Insufficient electrical grid capacity and a lack of industry to support the zero-emission mandate compounds the need for integrated policy solutions between stakeholders in rural places. Although rural schools can be the "*single most resource rich institution*" (Emery, 1988, p. 10) in rural towns, too frequently they are absent from conversations of economic development.

In the same speech where Governor Hochul announced the coming changes to transportation, she proclaimed that "*the days of New Yorkers questioning whether their government is actually working for them are over*" (Hochul, 2022, para. 8). Yet, in rural regions of the state, school districts, local government officials, and those who oversee the rural infrastructure are still wondering if their state government actually is listening to their concerns related to the zero-emission mandate. Recently, New York State offered districts a deadline extension of two years (Arpey, 2025) which is still a tight deadline for the herculean task.

As the dynamic contours of zero-emissions school transportation policies continue to develop, it remains to be seen what the future will hold for schools in rural New York State. Rural school transportation is ripe for the development of integrated solutions. The zero-emission mandate is one of the complex problems facing rural places which assault "*the quality of life we want to see for our communities*" (Gruenewald & Smith, 2008, p. 252). Stakeholders continue to give voice to the distinct needs of their communities in hopes of creating a better future and greater opportunities for students while advocating for policies that acknowledge the unique needs of the rural communities they live in.

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