



Greener Fleets

Meeting the demand for clean transit



Transportation
for America

Executive Summary

In 2021, America's transportation sector emitted 38 percent of the nation's total energy-related carbon emissions, the largest share of carbon emissions of any sector in the economy.¹ Public transit's contribution to transportation emissions are small compared to private auto emissions. However, almost all public transit is under public agency control, therefore transit's emissions can be mitigated through policy. Congress has provided the Federal Transit Administration (FTA) with funding programs specifically to "make greater reductions in energy consumption and harmful emissions, including direct carbon emissions."²

This white paper discusses findings based on Transportation for America's data analysis of all applications submitted in the fiscal year 2022 (FY22) for the Low or No Emission Vehicle ("Low No", "5339(c)") and Buses and Bus Facilities ("5339(b)") funding programs. We analyzed these applications and their awards to better understand how the program is serving U.S. transit agencies' needs across the country, and we offer policy recommendations to support America's climate goals and emission reduction efforts.

KEY FINDINGS

Applications for grants for the FY22 no-emission projects are in extremely high demand, composing 86 percent of the combined programs' grant requests. In addition, because 25 percent of the larger Low No program is reserved for low-emission projects only, zero-emission projects had less than a one in four chance of receiving a grant award. In the 5339(b) program, where no fuel type constraints exist, no-emission projects had a one in six chance of being awarded while consuming 83 percent of the program's available funding, reflective of zero-emission's high demand and funding scarcity. Meanwhile, the low-emission component of the Low No program was so undersubscribed, there was not enough demand to fill the statutory minimum.

Low-emission projects made up such a small proportion of applications that nearly all requested funding was awarded in that category, and awards still did not add up to the statutorily required 25 percent.

Based on this high demand for electric buses from U.S. transit agencies, **we conclude that the arbitrary 25 percent required funding allocation for low-emission projects in the Low No program is artificially constraining the conversion to zero-emission vehicles.**

Requiring 25 percent of funding to go to low-emission projects could unintentionally lock transit agencies into preventable emissions for another decade or more. The requirement gives low-emission projects a greater chance of being awarded funding based on current fuel demands, incentivizing transit agencies to propose low-emission fuel projects.

Background

The purpose of the Low No program is to support the transition of the nation’s transit fleet to the lowest polluting and most energy-efficient transit vehicles. The Low No competitive program provides funding to recipients for the purchase or lease of zero-emission and/or low-emission transit buses, as well as their supporting facilities.³ In FY22, the Low No program received \$1,105,329,750 in funding.⁴ The Low No program is required to award 25 percent of funding for low-emission buses and facilities such as diesel hybrid buses, compressed natural gas (CNG) buses, and fueling infrastructure. The remaining 75 percent is available for zero-emission buses and facilities using electricity and/or hydrogen as fuel.

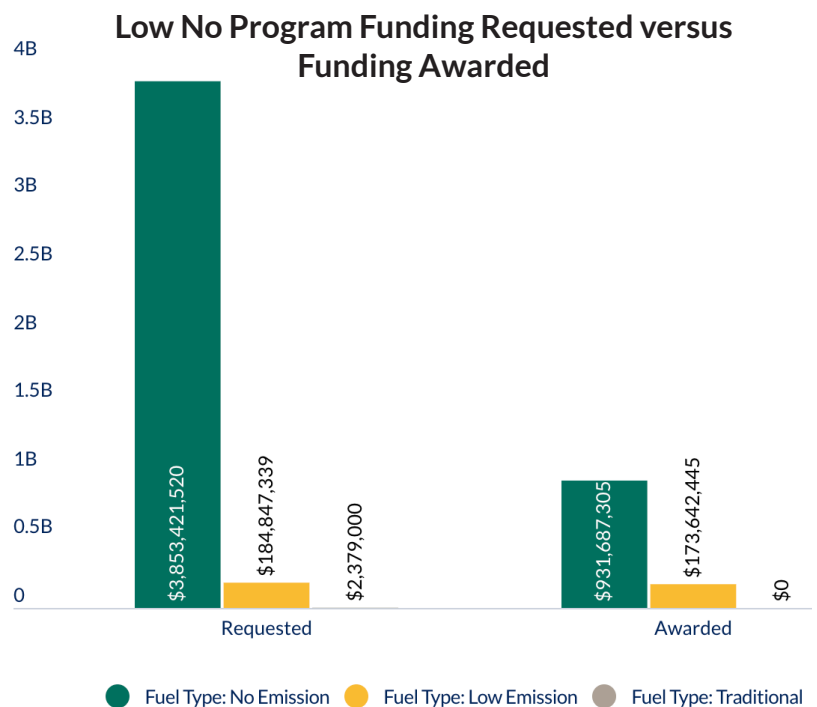
The Bus and Bus Facilities 5339(b) is a competitive program that helps bridge a funding gap in the Bus and Bus Facilities formula (‘5339(a)’) program.⁵ Of the 5339(b) grant money awarded, around 60 percent of funds are used for bus facilities. As such, this is an important funding source for bus barns and asset upgrades that support emission reduction operations across the country. The remaining ~40 percent of federal grants are used to replace buses. In FY22, the 5339(b) program received \$551,366,311 in funding.⁶

FY22 Grant Application Analysis

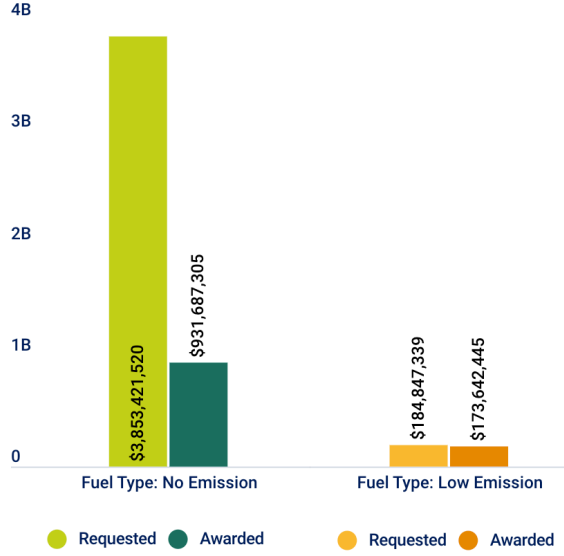
Using data collected from a Freedom of Information Act (FOIA) request from the U.S. Department of Transportation, our team analyzed applications submitted by American transit agencies to the Low No and 5339(b) programs to consider trends in project fuel demands versus project fuels that were awarded funds.

LOW NO PROGRAM APPLICATIONS

The Low No program was heavily oversubscribed in FY22 with transit agencies applying for four times the available funding. However, demand was particularly strong for zero-emissions projects which encompassed approximately 95 percent of the requested funding. Low-emission projects made up such a small proportion of applications that nearly all requested funding was awarded in that category, and awards still did not add up to the statutorily required 25 percent.



Low No Program Funding by Fuel Type

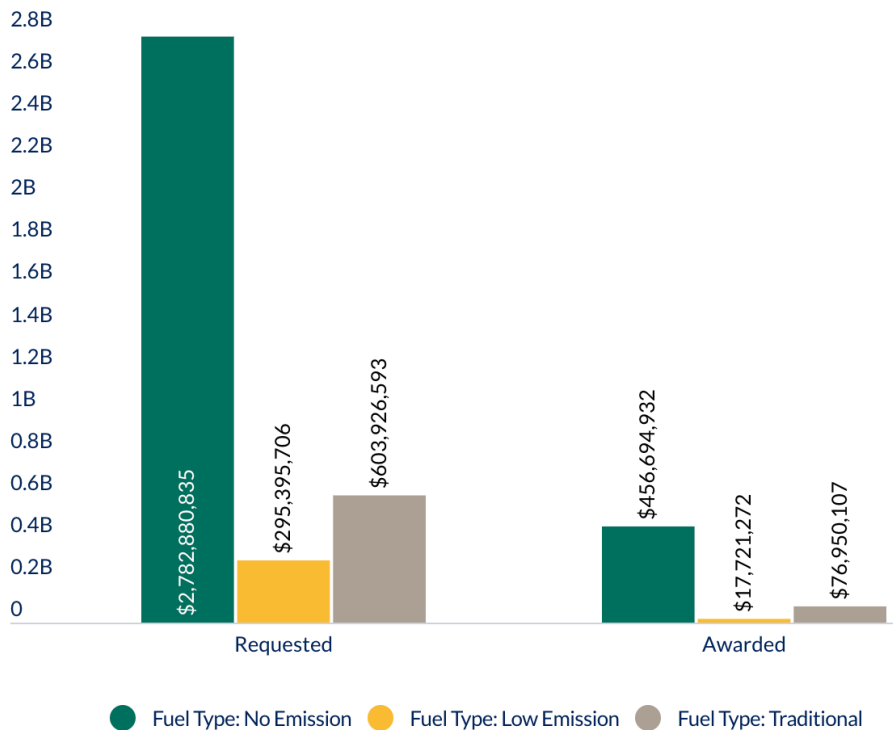


When you compare requested funding more directly with awarded funding, you can see that **nearly all low-emission requested funding was awarded.**

BUS AND BUS FACILITIES PROGRAM APPLICATIONS

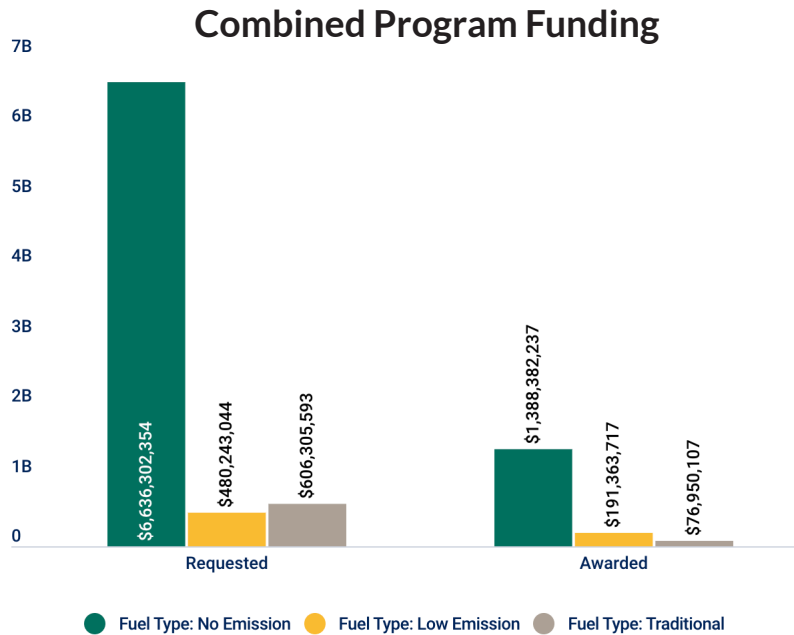
The 5339(b) program was oversubscribed in FY22 with requested funding exceeding available funding by over 6.5 times. Applications for zero emissions projects made up 76 percent of the requested funding in this program.

Bus and Bus Facilities Program Funding



COMBINED PROGRAMS

Because Low No and 5339(b) have similar eligibilities, it is useful to look at the combined applications and awards from these two programs. Overall, transit agency-requested funding exceeded awards by over 4.5 times in the combined programs. Requested zero-emissions project funding made up 86 percent of all requested funding.

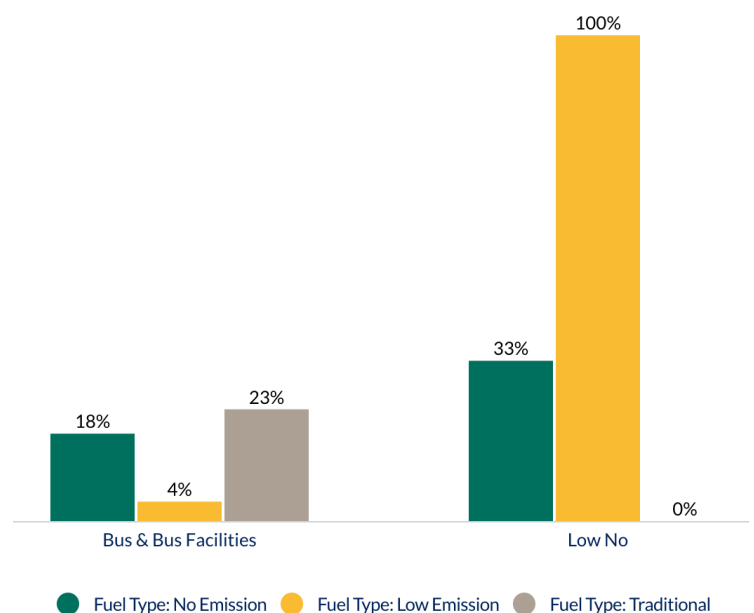


FUEL CHOICE'S IMPACT ON AWARD PROBABILITY

Because the 25 percent low-emission quota in the Low No program was so undersubscribed, every low-emission applicant received an award regardless of the rating (Highly Recommended, Recommended, Not Recommended) of their project. To compare, applicants with zero-emission projects had only a 33 percent chance of receiving any funding. In the 5339(b) program their chances were even lower, at 18 percent.

This dynamic creates a strong incentive for agencies to give up on applying for funding for zero-emission projects, and instead use the Low No program to apply for funding for diesel-electric hybrid buses.

Probability of Winning a Grant



Recommendations

Applications for low-emission projects are up in FY23. Congress likely did not intend to drive a shift in demand and investment toward low-emission projects at the expense of investments in zero-emission transit, but the 25 percent low-emission requirement appears to be doing exactly that.

The potential impacts of these trends going forward could lock transit agencies into emissions for decades. Instead, the policy structure of these programs must be reformed to capitalize on the clear demand for zero-emission solutions and maximize funding for zero-emission electric buses.

The Low No and 5339(b) programs are essential to ensuring American transit agencies can replace their aging bus fleets with low and zero-emission vehicles. Congress can do more to ensure that these programs are working to accomplish emission reduction goals. Here are our recommendations:

1 Eliminate the arbitrary requirement that 25 percent of Low No funding goes to low-emission vehicles. At a minimum, funding should be awarded in proportion to application demand instead. Ideally, zero-emission projects should be more competitive.

The 5339(b) program already sets aside 15 percent of funding for rural community projects.⁷ Rural agencies have all the flexibility they need within this 15 percent set aside to apply for low-emissions project funding if zero-emission projects are not feasible in their communities. The Low No program should focus on increasing funding for zero-emissions projects.

2 Increase funding for both 5339(b) and Low No to meet the overall demand for buses and facilities, which currently far outstrips supply. Current funding is insufficient to convert the fleet as rapidly as we should.

3 Create incentives for both programs to leverage state, regional, utility, and local funding to encourage applicants to propose zero-emission projects at scale and increase the return on investment.

Consider reducing the matching funding requirements of Tribes and Justice40 communities, particularly when applying for no-emission grants in the Low No program. This could encourage more zero-emission projects in these communities.

4 Increase transparency of the program by making basic application and award information available on FTA's website.

FTA should continue to look for ways to simplify the application process and help agencies understand how to make their applications competitive.

While these recommendations can get these two programs on a better path, **Congress and FTA should work together to form a vision for how the Low No and 5339(b) programs can support American transit agencies in providing excellent transit service in our communities and converting their operations to zero-emissions rapidly** enough to meet greenhouse gas reductions goals and improve air quality in the communities they serve.

Appendix

METHODOLOGY AND ASSUMPTIONS

Transportation for America filed a Freedom of Information Act (FOIA) request on 31-Oct-2022 to collect data on the volume and content of applications submitted to the Low No and 5339(b) programs in 2022. After a negotiation period in late December 2022, FTA agreed to provide a synthesized data set due to the volume of applications. FTA provided the data on 25-Jan-2023. We analyzed application trends in fuel types and awards per separate program and combined.

The FOIA contained project applications to the Low No and 5339(b) programs for a wide variety of fuel types. This included projects in which there was a mix of fuel types, but a dominant fuel type was indicated. We grouped projects into categories of no-emission, low-emission, and traditional high-emitting traditional fuels. These fuel categories are organized below:

No-emission:

- Battery electric
- Battery electric/mixed
- Hydrogen fuel cell
- Hydrogen fuel cell/mixed

Low-emission:

- CNG
- CNG/mixed
- Diesel-electric hybrid
- Diesel-electric hybrid/mixed
- Propane
- Propane/mixed

Traditional high-emitting:

- Diesel
- Diesel/mixed
- Gasoline
- Not Specified

Acknowledgments

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Endnotes

- 1 Shirley, Chad, and Ron Gecan. “Emissions of Carbon Dioxide in the Transportation Sector.” Congressional Budget Office. Infrastructure and Transportation, December 2022. www.cbo.gov/system/files/2022-12/58566-co2-emissions-transportation.pdf.
- 2 “49 U.S. Code § 5339(C)(5)(A) - Grants for Buses and Bus Facilities.” Legal Information Institute. Cornell Law School. Accessed April 3, 2023. www.law.cornell.edu/uscode/text/49/5339.
- 3 “Low or No Emission Vehicle Program - 5339(C).” Low or No Emission Vehicle Program - 5339(c) | FTA. Department of Transportation. Accessed March 15, 2023. www.transit.dot.gov/lowno.
- 4 “Announcement of Fiscal Year 2022 Low or No Emission Program and Grants for Buses and Bus Facilities Program and Project Selections.” Federal Register. Federal Transit Administration (FTA), Department of Transportation (DOT). Accessed March 24, 2023. www.federalregister.gov/documents/2022/08/18/2022-17751/announcement-of-fiscal-year-2022-low-or-no-emission-program-and-grants-for-buses-and-bus-facilities#p-6.
- 5 “Grants for Buses and Bus Facilities Program.” Grants for Buses and Bus Facilities Program | FTA. Department of Transportation. Accessed March 15, 2023. www.transit.dot.gov/bus-program.
- 6 “Announcement of Fiscal Year 2022 Low or No Emission Program and Grants for Buses and Bus Facilities Program and Project Selections.” Federal Register. Federal Transit Administration (FTA), Department of Transportation (DOT). Accessed March 24, 2023. www.federalregister.gov/documents/2022/08/18/2022-17751/announcement-of-fiscal-year-2022-low-or-no-emission-program-and-grants-for-buses-and-bus-facilities#p-6.
- 7 “Announcement of Fiscal Year 2022 Low or No Emission Program and Grants for Buses and Bus Facilities Program and Project Selections.” Federal Register. Federal Transit Administration (FTA), Department of Transportation (DOT). Accessed March 26, 2023. www.federalregister.gov/d/2022-17751/p-9.