Majority Staff Report Examining the Environmental Protection Agency's Clean School Bus Program

ENERGY & COMMERCE

Chair Cathy McMorris Rodgers

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I. Executive Summary

School buses transport more than 25 million American students daily, covering over four billion miles each year.[1] Although most American school buses run on diesel, the use of new "clean school bus" models has grown in recent years.[2] Supporters of clean school buses, which utilize electricity or alternative fuels, such as propane or compressed natural gas (CNG), extoll the virtues of their lower emissions levels.[3] Considerable federal and state taxpayer-funded subsidies have pushed the adoption of electric school buses (ESBs), one prominent type of clean school bus.[4] The non-profit organization World Resources Institute's Electric School Bus Initiative estimates that, as of July 1, 2024, over 12 thousand ESBs are in some stage of adoption—awarded, ordered, delivered or operating—in the United States.[5]

In 2021, the Infrastructure Investment and Jobs Act (IIJA) authorized the Environmental Protection Agency (EPA) to create the Clean School Bus Program.[6] The IIJA appropriated $5 billion over five years for the EPA to disburse among eligible recipients for replacing traditional

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[1] ENVTL. PROT. AGENCY, EPA-420-R-24-001, EPA CLEAN SCHOOL BUS PROGRAM: THIRD REPORT TO CONGRESS, FISCAL YEAR 2023 5 (2024), https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1019JFZ.pdf.
[2] *See, e.g.*, *id.*; DEP'T OF ENERGY, *FOTW #1320, December 11, 2023: Number of U.S. Electric School Buses More than Doubled from March 2022 to June 2023* (Dec. 11, 2023), https://www.energy.gov/eere/vehicles/articles/fotw-1320-december-11-2023-number-us-electric-school-buses-more-doubled. The Infrastructure Investment and Jobs Act defines "clean school bus" as one that is a zero-emission school bus or reduces emissions and is operated in part or entirely using an alternative fuel. Pub. L. No. 117-58 § 71101.
[3] ENVTL. PROT. AGENCY, *supra* note 1, at 5.
[4] Joann Muller, *Electric School Buses Are Practically Free Now*, AXIOS (Dec. 19, 2022), https://www.axios.com/2022/12/19/electric-school-buses.
[5] ELEC. SCHOOL BUS INITIATIVE, *Electric School Bus Dashboard*, https://electricschoolbusinitiative.org/electric-school-bus-data-dashboard (last visited Aug. 1, 2024) (data updated July 1, 2024). The Electric School Bus Initiative defines a "committed" ESB as "one in any of the four stages of adoption: awarded, ordered, delivered or operating."
[6] § 71101.

diesel buses with zero-emission or lower-emission alternatives.[7] As of August 1, 2024, the program has awarded $2.7 billion in funding for 8,651 ESBs.[8]

The Subcommittee on Oversight and Investigations (the Oversight Subcommittee) of the Committee on Energy and Commerce (the Committee) oversees federal agencies within the Committee's jurisdiction, which includes the EPA. Throughout the 118th Congress, the Oversight Subcommittee has examined both the push to increase adoption of ESBs and the EPA's administration of the Clean School Bus Program. The Oversight Subcommittee convened a hearing,[9] conducted research, engaged in discussions with the EPA Office of the Inspector General (OIG) about the program, and both the Oversight Subcommittee and the Subcommittee on Environment, Manufacturing and Critical Materials (Environment Subcommittee) requested the EPA provide specific information on the program.[10] The Oversight Subcommittee surveyed 33 school districts that participated in the 2022 Clean School Bus Rebate Program. The survey, as described in the Appendix, was designed to achieve a representative sample of the entire nation.

As a result of the investigation, the Oversight Subcommittee uncovered serious shortcomings and deficiencies with both ESBs and the Biden-Harris administration's Clean School Bus Program:

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[7] *Id*.
[8] ENVTL. PROT. AGENCY, *Clean School Bus Program Awards*, https://www.epa.gov/cleanschoolbus/clean-school-bus-program-awards (last visited Aug. 1, 2024).
[9] *Making the Grade?: Audit of the Environmental Protection Agency's Clean School Bus Program: Hearing Before the Subcomm. on Oversight and Investigations of the H. Comm. on Energy and Commerce*, 118th Cong. (2023) [hereinafter *OIG Oversight Hearing*].
[10] Letter from Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce, et al., to Michael S. Regan, Adm'r, Envtl. Prot. Agency (Apr. 5, 2024). The Committee sent the EPA an additional letter from Committee Chair Cathy McMorris Rodgers and then-Subcommittee on Environment, Manufacturing, and Critical Materials Chair Bill Johnson. Letter from Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce and Bill Johnson, Chair, Subcomm. on Envt., Mfg., and Critical Materials, to Michael Regan, Adm'r, Envtl. Prot. Agency (Apr. 20, 2023).

- An average ESB purchased under the first iteration of the program cost $381,191, $200,000-$300,000 more than an equivalent diesel bus and around $150,000 more than an equivalent propane or CNG bus.
- ESB batteries rely on opaque supply chains rife with national security risks and that pose grave human rights concerns, and are to the benefit of adversarial regimes, such as the Chinese Communist Party (CCP), which largely has a monopoly on certain parts of the supply chain for these products. The battery production required to power ESBs also results in serious environmental damage, while battery recycling technology and infrastructure lags behind the planned proliferation of battery use.
- ESBs are unsuitable for the needs of some school districts, and environmental conditions such as very high or low temperatures exacerbate their inefficiency.
- The EPA OIG has raised serious concerns about the EPA's management and execution of the program. The EPA OIG found the EPA did not require attestations of truth from applicants, lacked procedures to verify applicant claims, and relied on insufficient self-certification to determine that applicants met EPA requirements. These failures, according to EPA OIG, have increased the risk for fraud, waste, and abuse in the program.
- The EPA's funding structure for the program has incentivized districts to choose costly ESBs over more cost-effective options such as propane and CNG clean buses.

This report examines these shortcomings, vulnerabilities, costs, and other concerns that have plagued the Clean School Bus Program from the beginning. The Biden-Harris administration's misguided preference for ESBs, the poor execution of the Clean School Bus Program, and the flaws inherent in ESBs could result in a significant waste of taxpayer funds.

II. Introduction to the Clean School Bus Program

A. Creation of the Clean School Bus Program

Enacted on November 15, 2021, the IIJA directed the EPA to establish the Clean School Bus Program.[11] It appropriated $5 billion over five fiscal years (FYs) (FY 2022-FY 2026) for the EPA to award funding for the replacement of existing school buses that emit higher levels of pollutants with zero-emission or clean school buses.[12]

The IIJA requires that in each fiscal year 50 percent of the awards be used for replacing existing school buses with zero-emission school buses and the remaining 50 percent be used for replacing existing school buses with clean school buses or zero-emission school buses.[13] The IIJA defines a "zero-emission school bus" as a bus certified by the EPA Administrator to produce zero exhaust emissions of specified air pollutants or any greenhouse gas, and a "clean school bus" as a bus certified by the EPA Administrator to reduce emissions and that uses an alternative fuel (such as propane or CNG), or is a zero-emission school bus.[14] In the three iterations of the Clean School Bus Program, the EPA has provided funding for ESBs, propane and CNG buses.[15] Of these three, only ESBs qualify as zero-emission buses.[16]

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[11] § 71101.
[12] *Id.*; ENVTL. PROT. AGENCY, *supra* note 1, at 5 (2024).
[13] § 71101.
[14] *Id.*
[15] ENVTL. PROT. AGENCY, QUESTIONS AND ANSWERS 2023 CLEAN SCHOOL BUS (CSB) REBATE PROGRAM 2 (2024), *available at* https://www.epa.gov/system/files/documents/2024-06/fy23-csb-rebate-questions-answers-2024-06-20_0.pdf; ENVTL. PROT. AGENCY, QUESTIONS AND ANSWERS: 2023 CLEAN SCHOOL BUS (CSB) GRANT PROGRAM 29 (2024), *available at* https://www.epa.gov/system/files/documents/2024-05/2023-csb-grants-q-and-a-2024-05-10.pdf; ENVTL. PROT. AGENCY, 2022 CLEAN SCHOOL BUS REBATES: QUESTIONS AND ANSWERS 21 (2022), *available at* https://www.epa.gov/system/files/documents/2024-05/fy22-csb-rebate-q-and-a-2024-05-22_1.pdf.
[16] ENVTL. PROT. AGENCY, EPA-420-F-23-024, EPA CLEAN SCHOOL BUS REBATE PROGRAM 1 (2023), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1018JNP.pdf.

As of August 1, 2024, the EPA has announced recipients of funds under three distinct programs: the 2022 Clean School Bus Rebate Program, 2023 Clean School Bus Grants Program, and the 2023 Clean School Bus Rebate Program.[17]

The IIJA authorized the EPA to utilize grants, rebates, and contracts to make awards of up to 100 percent of the cost of a replacement bus, as well as eligible infrastructure upgrades.[18] The statute also permitted the EPA to prioritize applicants serving high-need local educational agencies, tribal schools, and rural or low-income areas, as well as those that secured additional outside sources of funding.[19] The EPA did not prioritize this last category in the FY 2022 and 2023 Clean School Bus Rebate Programs but did award additional points in the application process for applicants leveraging outside funds in the FY 2023 Clean School Bus Grant Program.[20] Initial eligible recipients were contractors who sold, contracted for the service of, or arranged financing for buses or infrastructure; nonprofit school transportation associations; and state, local, or tribal entities responsible for bus transportation.[21] The FY 2023 Consolidated Appropriations Act added charter schools and entities that lease, license, or contract school bus services as eligible recipients.[22]

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[17] ENVTL. PROT. AGENCY, *EPA Clean School Bus Program Awards*, https://www.epa.gov/cleanschoolbus (last visited Aug. 1, 2024).
[18] Pub. L. No. 117-58 § 71101; ENVTL. PROT. AGENCY, *supra* note 1, at 6.
[19] § 71101; ENV'T. PROT. AGENCY, ENVTL. PROT. AGENCY, *supra* note 1, at 8.
[20] ENVTL. PROT. AGENCY, *supra* note 1, at 8.
[21] *Id.*
[22] Pub. L. No. 117-328, div. O, tit IV, § 405; ENVTL. PROT. AGENCY, *supra* note 1, at 7.

B. 2022 Clean School Bus Rebate Program

The EPA launched the 2022 Clean School Bus Rebates Program in May 2022.[23] Applicants could apply for funding to replace up to 25 buses with clean school buses.[24] Eligible expenses included the bus, the electrical charging infrastructure unit, and the electric panel.[25] Propane and CNG buses were not eligible for fueling infrastructure funding.[26]

School District Prioritization Status	Replacement Bus Fuel Type and Size					
	ZE — Class 7+	ZE — Class 3-6	CNG — Class 7+	CNG — Class 3-6	Propane — Class 7+	Propane — Class 3-6
School districts that meet one or more prioritization criteria	$375,000	$285,000	$45,000	$30,000	$30,000	$25,000
Other eligible school districts	$250,000	$190,000	$30,000	$20,000	$20,000	$15,000

Figure 1: 2022 Rebate Program funding maximums.[27]

The application period closed in August 2022, and selectees, chosen by a random lottery process, were notified in October 2022.[28] Approximately $891 million was awarded to fund

[23] ENVTL. PROT. AGENCY, *supra* note 1, at 12.
[24] ENVTL. PROT. AGENCY, EPA-420-B-22-025, 2022 CLEAN SCHOOL BUS (CSB) REBATES PROGRAM GUIDE 6 (2022), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi/P1014WNH.PDF?Dockey=P1014WNH.pdf.
[25] *Id.* at 6-7.
[26] ENVTL. PROT. AGENCY, 2022 CLEAN SCHOOL BUS REBATES: QUESTIONS AND ANSWERS, supra note 15, at 39.
[27] ENVTL. PROT. AGENCY, EPA-420-R-23-002, EPA CLEAN SCHOOL BUS PROGRAM: SECOND REPORT TO CONGRESS, FISCAL YEAR 2023 9 (2023), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1016LN0.pdf; "ZE" buses refer to ESBs. *See* ENVTL. PROT. AGENCY, 2022 CLEAN SCHOOL BUS REBATES: QUESTIONS AND ANSWERS, *supra* note 15, at 23.
[28] ENVTL. PROT. AGENCY, *supra* note 1, at 12.

2,394 buses for 376 selectees.[29] More than 99 percent of selectees were low-income, rural, and tribal school districts.[30]

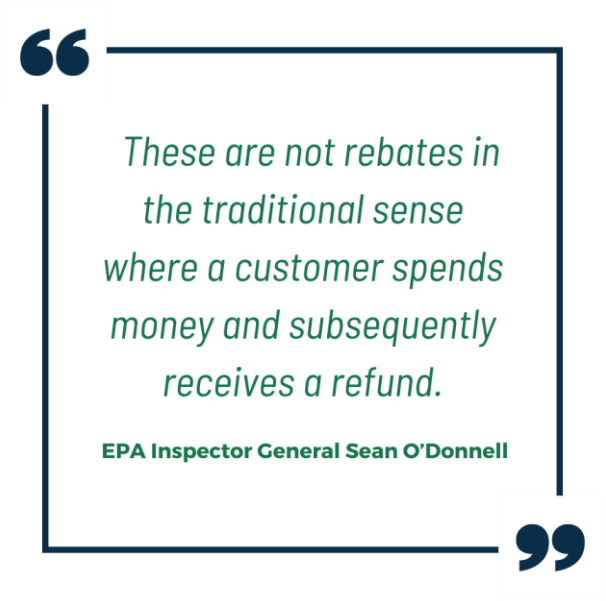
School District Type	Number of Selectees	Bus Information				Awarded Funding
		CNG	Propane	Electric	Total Buses	
Prioritized	374	1	115	2,249	2,365	$885,650,000
Non-prioritized	2	5	1	23	29	$5,799,000
Totals	**376**	**6**	**116**	**2,272**	**2,394**	**$891,449,000**

Figure 2: Buses chosen by 2022 Rebate Program selectees.[31]

Selectees had until April 2023 to request a rebate payment for their replacement bus(es), as well as any eligible charging infrastructure, by submitting their Payment Request Form and transaction confirmation documents to the EPA.[32] The EPA then reviewed the paperwork before

[29] *Id.* at 13.
[30] *Id.* at 15.
[31] *Id.* at 13.
[32] *Id.* at 16.

sending the rebate funds to the selectee's bank account.[33] As the EPA Inspector General Sean O'Donnell stated in his testimony before the Oversight Subcommittee, "these are not rebates in the traditional sense where a customer spends money and subsequently receives a refund."[34] Inspector General O'Donnell explained, "Instead, after a recipient submits a payment request form with verified purchase orders, but before the recipient has received the bus, the EPA [wires] the money to the recipient's bank account."[35]



In fall 2023, the EPA issued the 2022 Rebates Close Out Form, requesting information on how the awarded money had been spent and if the replaced bus(es) had either been "scrapped, sold, or donated."[36] The EPA requires that all replaced diesel school buses predating 2011 be scrapped rather than sold or donated.[37]

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[33] *Id.*
[34] *OIG Oversight Hearing*, *supra* note 9 (written statement of Sean O'Donnell, Inspector General, Environmental Protection Agency).
[35] *Id.* (oral statement of Sean O'Donnell, Inspector General, Environmental Protection Agency).
[36] ENVTL. PROT. AGENCY, *supra* note 1, at 18.
[37] *Id.* at 9.

C. 2023 Clean School Bus Grant Program

The EPA awarded a second round of funding through the 2023 Clean School Bus Grant Program. In April 2023, the EPA announced the availability of $400 million in Clean School Bus grants.[38] The application process opened on April 24, 2023, and closed on August 22, 2023.[39]

The 2022 Rebate Program and 2023 Grant Program differed in several aspects. While the 2022 Rebate Program only allowed applicants to apply for funding for a maximum of 25 buses,[40] the grant program included higher minimum and maximum numbers for requested buses. Under the 2023 Grant Program, school districts could request funding for a minimum of 15 school buses and up to a maximum of 50, while third-party applicants could request a minimum of 25 and a maximum of 100.[41] The application and selection processes also differed: while the 2022 Rebate Program employed a simple process and selected applicants based on a lottery, the 2023 Grant Program utilized a "longer, more detailed" application under which the EPA made selections based on a scoring criteria.[42] Unlike the Rebate Program, the Grant Program funds were subject to uniform grant guidance and other audit requirements.[43]

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[38] *Id.* at 23.
[39] ENVTL. PROT. AGENCY, EPA-420-R-23-002, EPA CLEAN SCHOOL BUS PROGRAM: SECOND REPORT TO CONGRESS, FISCAL YEAR 2023, *supra* note 27, at 9.
[40] *Id.*
[41] ENVTL. PROT. AGENCY, *supra* note 1, at 24.
[42] *Id.* at 18.
[43] *OIG Oversight Hearing*, *supra* note 9 (testimony of Sean O'Donnell, Inspector General, Environmental Protection Agency).

School District Prioritization Status	Replacement Bus Fuel Type and Size					
	ZE — Class 7+	ZE — Class 3-6	CNG — Class 7+	CNG — Class 3-6	Propane — Class 7+	Propane — Class 3-6
Buses serving school districts that meet one or more prioritization criteria	$395,000	$315,000	$45,000	$30,000	$35,000	$30,000
Buses serving school districts that are not prioritized	$250,000	$195,000	$30,000	$20,000	$25,000	$20,000

***Funding levels include combined bus and EV charging infrastructure**

Figure 3: 2023 Grant Program funding maximums.[44]

After the application process closed, the EPA raised the amount of awarded funding from the originally announced $400 million to approximately $965 million, and the selectees were notified in late December 2023 and early January 2024.[45] The EPA awarded 67 grants intended to replace approximately 2,700 buses in 280 school districts,[46] compared to the 2,394 buses for 376 selectees in the 2022 Rebate Program.[47] In testimony before the Oversight Subcommittee, EPA Inspector General Sean O'Donnell stated that interest in the Grant Program was lower than the 2022 Rebate Program, noting that the Rebate Program had a "71-page wait list" for funding. [48]

[44] ENVTL. PROT. AGENCY, *supra* note 1, at 24.
[45] *Id.* at 25.
[46] *Id.* at 26.
[47] *Id.* at 13.
[48] *OIG Oversight Hearing*, *supra* note 9 (testimony of Sean O'Donnell, Inspector General, Environmental Protection Agency).

D. 2023 Clean School Bus Rebate Program

In September 2023, the EPA announced the 2023 Clean School Bus Rebate Program, the third and most recent program, planning to award at least $500 million.[49] This program maintained the same applicant eligibility requirements as the 2023 Clean School Bus Grant Program.[50]

School District Prioritization Status	Replacement Bus Fuel Type and Size					
	ZE — Class 7+	ZE — Class 3-6	CNG — Class 7+	CNG — Class 3-6	Propane — Class 7+	Propane — Class 3-6
Buses serving school districts that meet one or more prioritization criteria	Up to $345,000	Up to $265,000	Up to $45,000	Up to $30,000	Up to $35,000	Up to $30,000
Buses serving school districts that are not prioritized	Up to $200,000	Up to $155,000	Up to $30,000	Up to $20,000	Up to $25,000	Up to $20,000

***Funding levels include combined bus and EV charging infrastructure**

Figure 4: 2023 Rebate Program funding maximums.[51]

The EPA introduced new mandatory application forms for the 2023 Clean School Bus Rebate Program.[52] The School Board Awareness Certification was required of all applicants to

[49] ENVTL. PROT. AGENCY, OFFICE OF TRANSP. & AIR QUALITY, EPA-420-B-23-032, 2023 CLEAN SCHOOL BUS REBATES PROGRAM GUIDE 3 (2023), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1018JIT.pdf.
[50] *See* ENVTL. PROT. AGENCY, EPA-420-B-23-032, 2023 CLEAN SCHOOL BUS REBATES PROGRAM GUIDE 5-6 (2023), *available at* https://www.epa.gov/system/files/documents/2024-05/420b24034.pdf; ENVTL. PROT. AGENCY, EPA-OAR-OTAQ-23-06, 2023 CLEAN SCHOOL BUS (CSB) GRANT PROGRAM NOTICE OF FUNDING OPPORTUNITY 13 (2023), *available at* https://www.epa.gov/system/files/documents/2023-04/2023-csb-grant-nofo-4-20-23.pdf (listing the same eligible recipients).
[51] ENVTL. PROT. AGENCY, *supra* note 1, at 27.
[52] *Id.*

attest that the relevant school board would be "supportive" of the application.[53] The School District Approval Letter, required for third-party applicants, ensured that all parties involved in the application "wanted to engage together."[54] Finally, the Electric Utility Partnership Template was required for applicants applying for an ESB to ensure utility companies were ready and willing to assist in the infrastructure planning process.[55]

The 2023 Rebate Program also changed the electrical infrastructure covered under the program. Under the 2022 Rebate Program, selectees received extra funding per replacement bus ($20,000 for prioritized districts and $13,000 for non-prioritized districts) for the charging infrastructure unit and electric panel.[56] The 2023 Grant Program combined the funds for buses and electric charging infrastructure, "allowing grant recipients the flexibility to determine the split between funding for the bus itself and the supporting infrastructure."[57] The 2023 Grant Program further added that battery energy storage systems and renewable on-sight power generation were eligible for infrastructure funds.[58] However, no infrastructure funding was available under any of the programs for CNG or propane buses.[59]

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[53] *Id.*
[54] *Id.*
[55] *Id.*
[56] ENVTL. PROT. AGENCY, EPA-420-R-23-002, EPA CLEAN SCHOOL BUS PROGRAM: SECOND REPORT TO CONGRESS, FISCAL YEAR 2023, *supra* note 27, at 10.
[57] ENVTL. PROT. AGENCY, *supra* note 1, at 24.
[58] *Id.* at 25.
[59] S*ee* ENVTL. PROT. AGENCY, QUESTIONS AND ANSWERS 2023 CLEAN SCHOOL BUS (CSB) REBATE PROGRAM, *supra* note 15, at 39; ENVTL. PROT. AGENCY, QUESTIONS AND ANSWERS: 2023 CLEAN SCHOOL BUS (CSB) GRANT PROGRAM, *supra* note 15, at 46; ENVTL. PROT. AGENCY, 2022 CLEAN SCHOOL BUS REBATES: QUESTIONS AND ANSWERS, *supra* note 15, at 39.

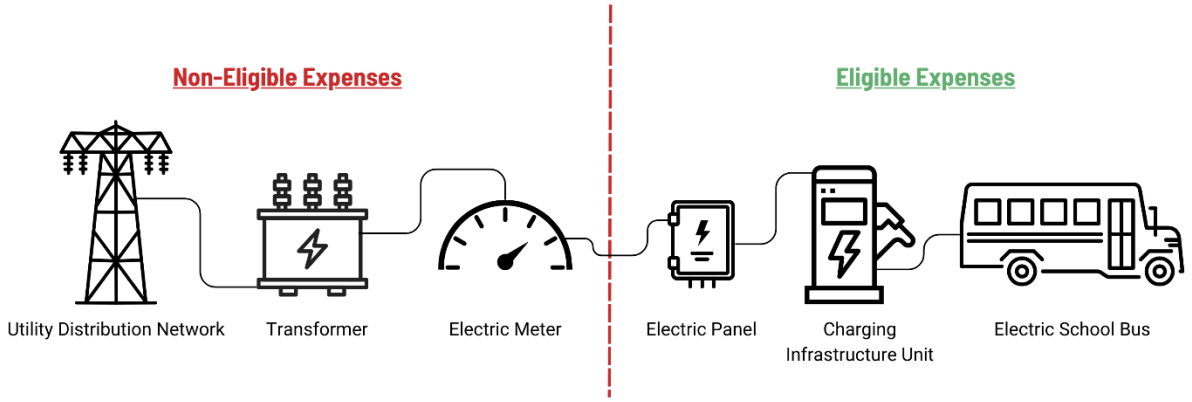

Figure 5: Infrastructure covered under the 2022 Rebate Program.[60]

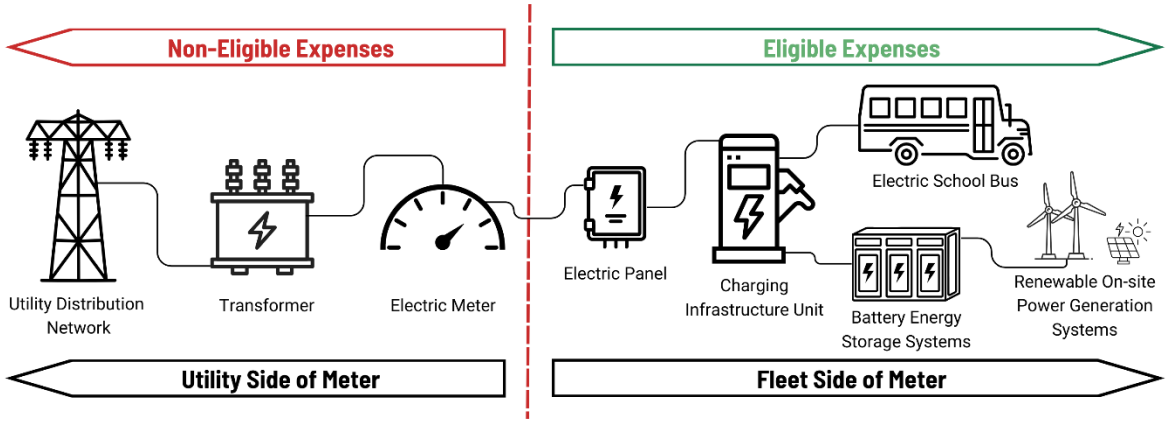

Figure 6: Infrastructure covered under the 2023 Grant Program.[61]

[60] ENVTL. PROT. AGENCY, EPA-420-R-23-002, EPA CLEAN SCHOOL BUS PROGRAM: SECOND REPORT TO CONGRESS, FISCAL YEAR 2023, *supra* note 27, at 10.
[61] ENVTL. PROT. AGENCY, *supra* note 1, at 25.

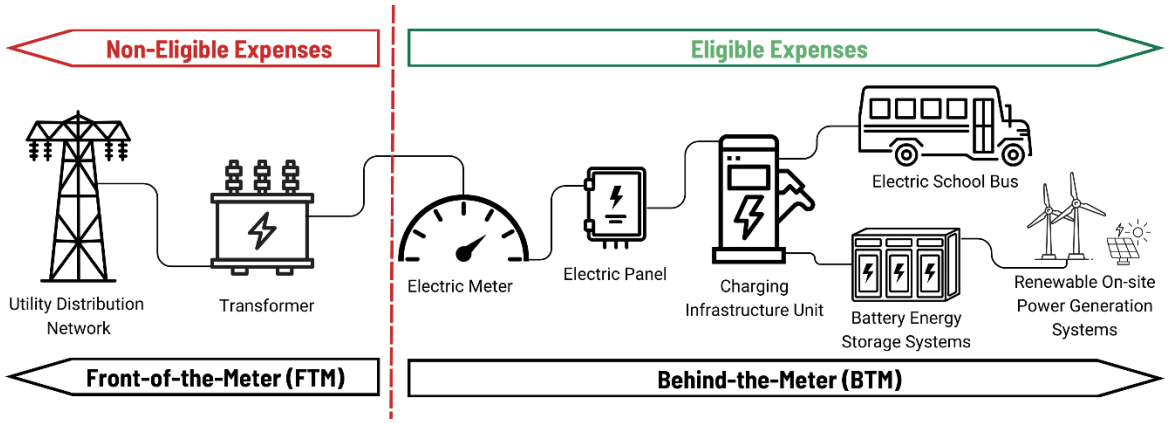

Figure 7: Infrastructure covered under the 2023 Rebate Program.[62]

The application period closed in February 2024.[63] The EPA initially announced funding of $500 million but ultimately awarded nearly $900 million and notified selectees in May 2024.[64] In its May 2024 announcement, the EPA stated that approximately 530 districts would receive funding to purchase over 3,400 buses, 92 percent of which would be electric.[65]

III. Concerns with Electric School Buses

ESB adoption has grown considerably following the creation of the Clean School Bus Program. In the fourth quarter of 2021, during which the IIJA was enacted, the World Resource Institute's Electric School Bus Initiative found 2,335 ESBs in any stage of adoption— awarded, ordered, delivered or operating—in the United States.[66] As of the second quarter of 2024, the

[62] ENVTL. PROT. AGENCY, *supra* note 1, at 28.
[63] ENVTL. PROT. AGENCY, *Clean School Bus Program Rebates*, https://www.epa.gov/cleanschoolbus/clean-school-bus-program-rebates (last visited July 9, 2024).
[64] *Id.*; Press Release, Envtl. Prot. Agency, Biden-Harris Administration Announces Recipients of Nearly $900 Million for Clean School Buses Under President's Investing in America Agenda, May 29, 2024, https://www.epa.gov/newsreleases/biden-harris-administration-announces-recipients-nearly-900-million-clean-school-buses.
[65] Press Release, Envtl. Prot. Agency, *supra* note 64.
[66] Lydia Freehafer et al., *The State of Electric School Bus Adoption in the US*, WORLD RES. INST. (July 1, 2024), https://www.wri.org/insights/where-electric-school-buses-us.

non-profit found 12,164 ESBs in any stage of adoption.[67] As ESB adoption increases, many challenges and difficulties continue to emerge.

A. Cost

Clean school buses are significantly more expensive than traditional diesel buses, with ESBs being the most expensive option. Full-sized diesel school buses typically cost around $100,000.[68] The average ESB in the 2022 Clean School Bus Rebate Program cost $381,190 while the average propane school bus cost $150,774.[69] CNG school buses are estimated to cost around $140,000.[70,71]

The estimated cost range for ESBs does not include expenses for necessary electrical infrastructure, which the Empire Center for Public Policy estimates cost anywhere from $10,000 to $30,000 per bus.[72] In some cases, this expense runs higher. For example, Ann Arbor Public Schools, which had expected to only have to spend $50,000 total on charging infrastructure for all four of its ESBs, ended up having to spend closer to $200,000.[73] One district that participated in the 2022 Clean School Bus Rebate Program informed the Oversight Subcommittee that it

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[67] *Id*.
[68] John Rosevear, *Electric School Buses Are Giving Kids a Cleaner, But Costlier, Ride to Class*, CNBC (Dec. 10, 2022), https://www.cnbc.com/2022/12/10/electric-school-buses-give-kids-a-cleaner-but-costlier-ride-.html.
[69] ENVTL. PROT. AGENCY, *supra* note 1, at 16.
[70] YELLOWSTONE-TETON CLEAN CITIES, EPA CLEAN SCHOOL BUS PROGRAM WYOMING COST SAVINGS BENEFITS ANALYSIS 1 (Dec. 15. 2023), https://ytcleancities.org/wp-content/uploads/2024/02/12_15_2023_EPA-CLEAN-SCHOOL-FINANCIAL-BENEFITS-.pdf (stating the cost of a Type C CNG school bus).
[71] DEP'T OF ENERGY, *Natural Gas School Buses Reward Utah District with Fuel Savings, Breath of Cleaner Air*, (Mar. 2, 2021), https://afdc.energy.gov/case/3096.
[72] Blog, James E. Hanley, *NYSERDA's Roadmap to Nowhere*, EMPIRE CTR. (Sept. 21, 2023), https://web.archive.org/web/20231203004908/https://www.empirecenter.org/publications/nyserdas-roadmap-to-nowhere/.
[73] Christian Lopez, *5 Factors to Consider with Electric School Buses*, SCHOOL BUS FLEET (Dec. 6, 2023), https://www.schoolbusfleet.com/10210996/concerns-with-electric-school-buses.

wished it was "made aware of the expense of the chargers needed for zero-emissions buses before requesting them."[74]

ESB advocates claim that the buses have lower operating costs compared to diesel buses.[75] For example, one district the Oversight Subcommittee surveyed cited that its energy models found transitioning away from diesel buses would be in the district's "financial benefit in the short term."[76] Another district told the Oversight Subcommittee that ESBs were appealing because they are "cheaper in the long run to operate."[77] In a study examining the state of Vermont's pilot ESB program, the Vermont Energy Investment Corporation found that "in the best case, a single electric bus reduced fuel and maintenance costs by around $8,000 per year."[78] But these savings don't come close to offsetting the tremendous upfront costs. The school district that spent the least in Vermont's pilot program, Barre Unified School District, still spent $336,320 on a Type C bus.[79] As reporting indicates a typical full-size Type C diesel bus costs about $100,000,[80] the lowest-spending district in Vermont's pilot program still spent around $230,000 more than it would have spent on an equivalent diesel bus.

Costly subsidies for ESBs are a poor use of federal taxpayer money at a time when school budgets are increasingly strained.[81] ESBs are currently too expensive for many school districts to

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[74] Response on file with Subcommittee.
[75] Alyssa Curran, *All About Total Cost of Ownership (TCO) for Electric School Buses*, ELEC. SCHOOL BUS INITIATIVE (May 17, 2023), https://electricschoolbusinitiative.org/all-about-total-cost-ownership-tco-electric-school-buses.
[76] Response on file with Subcommittee.
[77] Response on file with Subcommittee.
[78] VT. ENERGY INV. CORP., *Vermont Electric School and Transit Bus Pilot Program Report* 35 (2023), https://dec.vermont.gov/sites/dec/files/aqc/mobile-sources/documents/VEIC_Final_VT_Electric_Bus_Pilot_Report_and_Appendices.pdf.
[79] *Id.* at 19.
[80] Rosevear, *supra* note 68 (stating the cost of a Type C diesel bus for comparison).
[81] *See* Matt Barnum, *The Pandemic Cash That Bolstered School Budgets Is About to Run Out*, WALL ST. J. (Oct. 30, 2023), https://www.wsj.com/us-news/education/public-school-budgets-65d24811 (describing funding challenges for schools).

afford without significant federal subsidies. Sue Gander, a supporter of ESBs, a former EPA official, and the current director of the World Resources Institute's Electric School Bus Initiative, acknowledges this: "The upfront is such that, without [government] incentives, you can't break even [in comparison to diesel buses]."[82]

The EPA also noted, in a written response to the Oversight Subcommittee, that it has "heard support for less expensive electric buses from both schools and industry" and seeks to "encourage lower bus prices in the market." [83] Currently, it is only the existence of massive taxpayer-funded subsidies that enables ESBs to compete with diesel buses and low emission buses in the market.

Currently, it is only the existence of massive taxpayer-funded subsidies that enables ESBs to compete with diesel buses and low emission buses in the market.

B. Environmental Impact

Supporters of ESB adoption often point to environmental impact to justify the billions of taxpayer dollars in government subsidies used to purchase ESBs. The Electric School Bus Initiative cites how ESBs provide "climate" and "air quality" benefits,[84] while the EPA has stated that ESBs lead to "reduced greenhouse gas emissions"[85] The EPA further stated in a written

[82] Rosevear, *supra* note 68.
[83] Letter from Tim Del Monico, Assoc. Adm'r, Envtl. Prot. Agency, to Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce 2 (May 14, 2024) (on file with the Committee).
[84] ELEC. SCHOOL BUS INITIATIVE, *Why We Need to Transition to Electric School Buses* (Oct. 17, 2022), https://electricschoolbusinitiative.org/why-we-need-transition-electric-school-buses.
[85] ENVTL. PROT. AGENCY, *Benefits of Clean School Buses*, https://www.epa.gov/cleanschoolbus/benefits-clean-school-buses (last visited July 22, 2024).

response to the Oversight Subcommittee that "reduction in greenhouse gas emissions from these bus replacements will also help address the outsized role of the transportation sector in fueling the climate crisis."[86] Additionally, districts that participated in the 2022 Rebate Program reported similar claims to the Oversight Subcommittee, with one district stating it expected ESBs "would contribute directly to an improved environment."[87] This rhetoric implies that mass adoption of ESBs would produce significant net positive environmental impacts—a claim that ignores the significant negative environmental impacts arising from ESB production in other parts of the world. The Environment Subcommittee discussed the negative environmental impacts associated with the rapid transition to electric vehicles in an April 2023 hearing.[88] It also explored challenges with securing the United States supply chains for critical materials necessary to build electric vehicles and the risks of over-reliance on China for these materials in a June 2024 hearing.[89]

i. Battery Production

Batteries for electric vehicles (EVs) require significantly more mineral inputs than conventional models. Electric cars require six times the amount of minerals as combustion engine cars, largely due to the batteries.[90] According to one assessment by a Manhattan Institute scholar, the refined materials required to produce a single EV battery necessitate the mining,

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[86] Letter from Tim Del Monico, Assoc. Adm'r, Envtl. Prot. Agency, to Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce 2 (May 14, 2024) (on file with the Committee).
[87] Response on file with Subcommittee.
[88] *Exposing the Environmental, Human Rights, and National Security Risks of the Biden Administration's Rush to Green Policies: Hearing Before the Subcomm. on Envt., Mfg., & Critical Materials of the H. Comm. on Energy and Commerce*, 118th Cong. (2024) [hereinafter *Risks of Rush to Green Policies Hearing*].
[89] *Securing America's Critical Materials Supply Chains and Economic Leadership*: *Hearing Before the Subcomm. on Envt., Mfg., & Critical Materials of the H. Comm. on Energy and Commerce*, 118th Cong. (2024) [hereinafter *Securing Critical Materials Supply Chains Hearing*]
[90] *See* INT'L ENERGY AGENCY, THE ROLE OF CRITICAL MINERALS IN CLEAN ENERGY TRANSITIONS 8, 89 (May 2021), https://iea.blob.core.windows.net/assets/24d5dfbb-a77a-4647-abcc-667867207f74/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf.

moving, and processing of more than 500,000 pounds of materials somewhere on the planet, or about ten times more than the approximately 25,000 pounds of petroleum that an internal combustion engine car uses over its lifetime.[91]

Additionally, according to analysis from *The New York Times,* "many mineral-rich nations have poor environmental and labor standards."[92] Extracting minerals from these nations, such as cobalt in the Democratic Republic of the Congo (DRC) and nickel in Indonesia, has led to problematic environmental consequences.

Researchers at the National Center for Atmospheric Research found alarming levels of pollution in the DRC directly connected to an increase in cobalt production.[93] As reported by *The New York Times,* cobalt mining regularly "produces hazardous tailings and slags that can leach into the environment, and studies have found high exposure in nearby communities, especially among children, to cobalt and other metals."[94] Moreover, scientists from the DRC's University of Lubumbashi reported that rivers near the largest mines are turning "hyper-acidic" due to cobalt and copper mining.[95]

Indonesia's environmental standards also lag behind the growth of its nickel industry.[96] Indonesia is responsible for 51 percent of global nickel output, and that percentage is expected to

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[91] *Risks of Rush to Green Policies Hearing*, *supra* note 88 (written statement of Mark Mills, Senior Fellow, Manhattan Institute).
[92] Ana Swanson, *The U.S. Needs Minerals for Electric Cars. Everyone Else Wants Them Too*, N.Y. TIMES, (May 21, 2023), https://www.nytimes.com/2023/05/21/business/economy/minerals-electric-cars-batteries.html.
[93] Keely Chalmers, *NCAR researchers find alarming pollution in Africa*, 9NEWS (Oct. 23, 2023), https://www.9news.com/article/tech/science/environment/coblat-mining-air-polution/73-66be1fa1-5cad-494d-bebc-9c845aa89609 (describing a study using satellite data from cobalt and copper miners).
[94] Hiroko Tabuchi & Brad Plumer, *How Green Are Electric Vehicles?*, N.Y. TIMES, (June 23, 2023), https://www.nytimes.com/2021/03/02/climate/electric-vehicles-environment.html.
[95] Michael J. Kavanagh, *River Near Congo Copper and Cobalt Mines are Toxic, Report Says*, BLOOMBERG (Mar. 27, 2024), https://www.bloomberg.com/news/articles/2024-03-27/rivers-near-congo-copper-and-cobalt-mines-are-toxic-report-says.
[96] *See* Swanson, *supra* note 92.

increase to 65 percent by 2030.[97] A *Wall Street Journal* investigation found that this growth is powered by "a coal binge," noting that a single nickel-focused industrial park will be expected to burn more coal than the entire nation of Brazil.[98] Nickel mining carries "steep environmental costs" in other parts of the nation, from "'devastating' levels of deforestation" to "waterways turned dark red" from pollution.[99] The production of electric vehicles comes at a significant environmental cost.

Analysis from the International Energy Agency shows that geographical concentration of several critical minerals, such as cobalt in the DRC, nickel in Indonesia, and rare earths in China, is unlikely to change in the near term.[100] Therefore, consideration of the environmental impact of ESBs must also include the pollution and environmental degradation that results from extracting the necessary materials.

ii. Battery Recycling

Further challenges arise at the end of a battery's life. EV batteries cannot be safely disposed of in landfills due to risks of fires and toxic metal leakage into the environment.[101] As such, they must be disposed of by hazardous waste professionals or recycled for future use. The technology to recycle EV batteries safely and efficiently has lagged behind EV battery adoption considerably. Research in the journal *Batteries* shows that a "remarkable difference between

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[97] A. Anantha Lakshmi, *Indonesia Vows to Speed up Nickel Output Despite Global Glut*, AUSTRALIAN FIN. REVIEW (Apr. 1, 2024), https://www.afr.com/world/asia/indonesia-vows-to-speed-up-nickel-output-despite-global-glut-20240401-p5fgfv.
[98] Jon Emont, *One Country's Dream of EV-Driven Prosperity Helps Fuel a Coal Binge Instead*, WALL ST. J. (Feb. 4, 2024), https://www.wsj.com/business/autos/one-countrys-dream-of-ev-driven-prosperity-helps-fuel-a-coal-binge-instead-e007cc86.
[99] Rebecca Tan, et al., *To Meet EV Demand, Industry Turns to Technology Long Deemed Hazardous,* WASH. POST (May 10, 2024), https://www.washingtonpost.com/world/interactive/2023/ev-nickel-refinery-dangers/?itid=lk_inline_manual_24.
[100] INT'L ENERGY AGENCY, *supra* note 90, at 121.
[101] Stephen Ornes, *How to Recycle an EV Battery*, PROCEEDINGS OF THE NAT'L ACAD. OF SCIENCES OF THE UNITED STATES OF AM. (Jan. 26, 2024), https://www.pnas.org/doi/10.1073/pnas.2400520121.

[lithium-ion battery] rate of production and rate of recycling" exists.[102] Experts, such as the University of Leicester's Dana Thompson, caution that current EV battery models "are really not designed to be recycled."[103] Payal Sampat, the Mining Programs director at the environmental nonprofit Earthworks, refers to prioritizing battery production over battery recycling as "short-term planning."[104] Furthermore, as Dr. Michelle Michot Foss explained to the Environment Subcommittee at a June 13, 2024, hearing, "[r]ecycling is an industrial activity that entails its own requirements and bears its own sustainability tradeoffs."[105]

Additionally, significant health and safety risks accompany battery recycling. One solvent recyclers use "is so toxic that the European Union has introduced restrictions on its use, and the [EPA] determined last year that it poses an 'unreasonable risk' to workers."[106] Pyrometallurgy, a process used by many recyclers, is "energy-intensive, emits toxic gases, and can't recover some valuable minerals, including lithium, at all."[107] According to Linda Gaines, an Environmental Scientist and Systems Analyst at the Department of Energy's Argonne National Laboratory, the rapidly changing nature of the current battery market means that parts being designed today might never find future buyers, with attempts to recycle them being akin to "recovering a dinosaur."[108]

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[102] Omar Velázquez-Martínez et al., *A Critical Review of Lithium-Ion Battery Recycling Processes from a Circular Economy Perspective*, BATTERIES (Nov. 5, 2019), https://www.mdpi.com/2313-0105/5/4/68.
[103] Ian Morse, *A Dead Battery Dilemma,* SCIENCE (May 20, 2021), https://www.science.org/content/article/millions-electric-cars-are-coming-what-happens-all-dead-batteries.
[104] Madeleine Stone, *As Electric Vehicles Take Off, We'll N*eed to *Recycle Their Batteries*, NAT'L GEOGRAPHIC (May 28, 2021), https://www.nationalgeographic.com/environment/article/electric-vehicles-take-off-recycling-ev-batteries.
[105] *Securing Critical Materials Supply Chains Hearing*, *supra* note 89 (written statement of Dr. Michelle Michot Foss, Fellow in Energy, Minerals, and Materials, Baker Institute for Public Policy, Rice University).
[106] Ian Morse, *A Dead Battery Dilemma*, SCIENCE (May 20, 2021), https://www.science.org/content/article/millions-electric-cars-are-coming-what-happens-all-dead-batteries.
[107] Ula Chrobak, *What Will It Take To Recycle Millions of Worn-Out EV Batteries?*, KNOWABLE MAG. (Sept. 21, 2022), https://knowablemagazine.org/content/article/technology/2022/what-will-it-take-to-recycle-ev-batteries.
[108] Morse, *supra* note 106.

The administration's subsidizing of ESBs in the current production and recycling landscape will have serious adverse environmental consequences that could outweigh the possible benefits of ESBs.

C. Increased Risks of Fires

ESBs, like all electric vehicles, pose unique fire risks. Battery fires last longer, are harder to extinguish, and have a greater tendency to reignite than fires involving internal combustion engines. For example, extinguishing a single Nissan Leaf electric car, with a battery far smaller than one in an ESB, requires up to 45,000 gallons of water—compared with the 500-1,000 gallons typically needed for gasoline-powered vehicles.[109] Additionally, EV battery fires take more than four hours longer to extinguish and can reignite up to two or three weeks after the initial fire.[110] According to *The Wall Street Journal,* firefighters report that the best practice for EV fires is to "stand back and watch it [the EV] burn."[111]

More ESBs equate to more intense fire risk at a time when fire departments are increasingly strained from a recruiting crisis; the *BBC* reported that the number of volunteer firefighters in the United States has fallen from 898,000 in 1984 to 677,000 in 2020, while the number of calls to fire departments has more than tripled.[112]

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[109] John Keilman, *Best Way to Extinguish a Flaming Electric Vehicle? Let It Burn*, WALL ST J. (Nov. 8, 2023), https://www.wsj.com/business/autos/best-way-to-extinguish-a-flaming-electric-vehicle-let-it-burn-f1fa2b53.
[110] Laurence Cawley, *The Crews Bracing Themselves for a Rise in Electric Car Fires*, BBC (Mar. 20, 2024), https://www.bbc.com/news/uk-england-66866327.
[111] Keilman, *supra* note 109.
[112] Sam Becker, *The Dire Shortage of Volunteer Firefighters in the US*, BBC (Jan. 25, 2024), https://www.bbc.com/worklife/article/20240124-the-dire-shortage-of-volunteer-firefighters-in-the-us.

D. Performance

ESBs also come with their own unique performance concerns. According to the New York Association for Pupil Transportation (NYAPT), "all-electric school bus technology currently is not a proven technology in the school bus market."[113] NYAPT Executive Director David Christopher stated that ESBs had a failure rate of 20 percent, meaning that on average 20 out of every 100 buses are inoperable on any given day.[114] For diesel school buses, this rate is only one to two percent,[115] while some research indicates CNG transit buses are only inoperable seven percent of days.[116] In another instance, an investigation by the Montgomery County Office of the Inspector General revealed that "mechanical failures with many electric buses [used by Montgomery County Public Schools] rendered them inoperable for extended periods."[117] In more than 180 instances, repairs were not completed within five working days, averaging 13 days per bus.[118]

Bus performance in rural areas is another concern, due to the greater distances travelled between fewer charging stations. School leaders in rural Californian districts have voiced concerns that California's mandate requiring all newly purchased or leased school buses to be zero emission by 2035 "is unworkable [for rural areas] unless electric bus technology

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[113] *Joint Legislative Hearing on Education, 2024-25 Executive Budget: Hearing Before N. Y. State Sen.* (Feb. 1, 2023) (written statement of David Christopher, Executive Director, New York Association for Pupil Transportation), https://www.nysenate.gov/sites/default/files/admin/structure/media/manage/filefile/a/2024-01/ny-association-for-pupil-transportation-24.pdf.
[114] Rick Karlin, *Recall and Repairs Sideline Electric School Buses*, TIMES UNION (Feb. 29, 2024), https://www.timesunion.com/business/article/recall-repairs-sideline-electric-school-buses-18693379.php.
[115] *Id*.
[116] NATURAL GAS VEHICLES FOR AM., *Maximize Clean Transit Investment: Natural Gas Outperforms Electric* 2 (Dec. 2020), https://ngvam.wpengine.com/wp-content/uploads/2020/12/NGVA-Transit-Full-Study-December-2020.pdf. Note that this source analyzes transit bus data rather than school bus data.
[117] MONTGOMERY CNTY. OFFICE OF INSPECTOR GEN., MEMORANDUM OF INVESTIGATION: INVESTIGATION OF MCPS' MANAGEMENT OF THE ELECTRIC BUS CONTRACT 1 (2024), https://montgomerycountymd.gov/OIG/Resources/Files/PDF/IGActivity/FY2025/MOI-FY25%20MCPS%20Electric%20Bus%20Fleet.pdf.
[118] *Id.* at 3.

significantly improves."[119] The limited range of ESBs is also a barrier to adoption. Standard ESBs from leading manufacturer Blue Bird have an advertised range of 120 miles on a single charge, while propane models can travel 400 miles before needing to refuel.[120] Local weather conditions can further lower the range of an ESB. Rural Lassen Union High School District told the *Los Angeles Times* that its four ESBs can travel, at most, 93 miles on a full charge in "peak" weather conditions.[121] Because of this, "the buses mostly stay parked."[122]

Lassen's neighboring school district, Modoc Joint Unified School District, covers such a sparsely populated area that the high school's basketball team sometimes travels up to 187 miles one way to play an opposing school.[123] Tom O'Malley, Modoc's superintendent, turned down $2.3 million in federal grant money after Modoc determined ESBs would be impractical for its rural district.[124] He stated that "[t]he technology is going to have to improve a lot before we would consider switching [to electric buses]."[125]

> *The technology is going to have to improve a lot before we would consider switching [to electric buses].*
>
> **Tom O'Malley, Modoc Joint Unified School District Superintendent**

[119] Hailey Branson-Potts, *California Is Pumped About Electric Buses. Rural Schools Say They're a Pain*, L.A. TIMES (Dec. 7, 2023), https://www.latimes.com/california/story/2023-12-07/california-electric-school-buses-rural-problems-climate-change.
[120] *Id.*
[121] *Id.*
[122] *Id.*
[123] *Id.*
[124] *Id.*
[125] *Id.*

Responses to the Oversight Subcommittee's survey painted a mixed picture when it came to performance, particularly in rural communities. One rural district reported no performance issues with its buses, stating it was "extremely happy with the opportunities provided by this program."[126] Meanwhile, another rural district reported issues similar to those described by the *Los Angeles Times*. This district expressed significant disappointment that the ESB it purchased with its rebate only averaged a range of 70-80 miles on a single charge, with a maximum of 120 miles in perfect conditions. Its experience led the district to conclude that ESBs were "not adequate for [a] rural district."[127]

Both cold and warm weather conditions create further challenges for ESB performance. While the EPA has stated that ESBs are "doing great in cold weather,"[128] a study from the National Renewable Energy Laboratory determined that an electric transit bus's range decreased by an average of 33 percent at 25°F.[129] At 0°F, a pilot study by Vermont Energy Investment Corporation found range decreases of 30-40 percent for Lion ESBs, while Blue Bird buses lost 80 percent of their initial range.[130] Meanwhile, the Joint Office of Energy and Transportation has cautioned that, while "electric school buses have proven to operate fairly well in warmer climates," temperatures of 80°F and higher "can reduce vehicle efficiency and performance."[131]

E. ESB Supply Chains

[126] Response on file with Subcommittee.
[127] Response on file with Subcommittee.
[128] Matt Renoux, *More Electric School Buses Coming to Kremmling,* 9NEWS (Feb. 6, 2024), https://www.9news.com/article/news/education/colorado-more-electric-school-buses/73-a828c164-a86f-4227-bc4a-c0fbe7c9e533.
[129] Joint Office of Energy AND TRANSP., DOE/GO-102023-6112, *Cold Weather Impacts on Electric School Buses* 1 (2024), https://driveelectric.gov/files/esb-cold-weather-help-sheet.pdf.
[130] Kate Cahalane et al., *Vermont Electric School and Transit Bus Pilot Program Report*, Vt. Energy Inv. Corp. 34 (June 23, 2023), https://dec.vermont.gov/sites/dec/files/aqc/mobile-sources/documents/VEIC_Final_VT_Electric_Bus_Pilot_Report_and_Appendices.pdf.
[131] JOINT OFFICE OF ENERGY AND TRANSP., DOE/GO-102024-6345, *Hot Weather Impacts on Electric School Buses* 1 (2024), https://driveelectric.gov/files/esb-hot-weather-help-sheet.pdf.

Production of critical minerals which are essential for ESB batteries is highly concentrated in a few countries,[132] and mineral processing is even more concentrated.[133] National security and human rights concerns complicate both the production and processing of ESB battery materials and components.

i. National Security

Promoting EVs like ESBs means enriching the People's Republic of China and the CCP because, as Morgan Stanley estimates, 90 percent of the EV battery supply chain relies on China.[134] As a *New York Times* article bluntly asserted: "Despite billions in Western investment, China is so far ahead [in EV battery manufacturing]—mining rare minerals, training engineers and building huge factories—that the rest of the world may take decades to catch up."[135] Mark P. Mills, a Senior Fellow at the Manhattan Institute, in testimony before the Environment Subcommittee stated that China's "strategic dominance [in producing or refining energy minerals needed to build renewable machinery] roughly double[s] OPEC's market share in oil," and building assembly facilities in the United States for products including EVs will not change this.[136]

China's domination of the EV supply chain begins with critical mineral mining. By 2025, China is expected to control 50 percent of the world's cobalt and 33 percent of the world's

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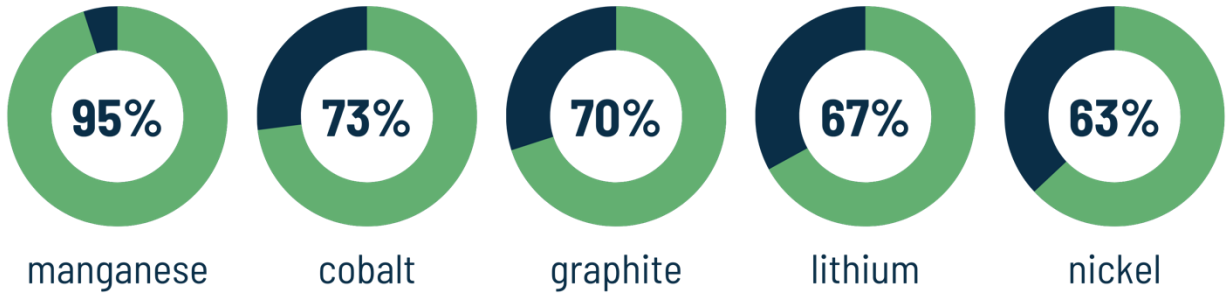
[132] INT'L ENERGY AGENCY, *supra* note 90, at 11-12.
[133] *Risks of Rush to Green Policies Hearing*, *supra* note 88 (written statement of Daniel Simmons, Principal, Simmons Energy and Environmental Strategies) (citing INT'L ENERGY AGENCY, THE ROLE OF CRITICAL MINERALS IN CLEAN ENERGY TRANSITIONS (2021), https://iea.blob.core.windows.net/assets/24d5dfbb-a77a-4647-abcc-667867207f74/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf).
[134] MORGAN STANLEY, *Rewiring the Supply Chain for Electric Vehicle Batteries* (Jul. 7, 2023), https://www.morganstanley.com/ideas/ev-battery-lithium-supply.
[135] Agnes Chang & Keith Bradsher, *Can the World Make an Electric Car Battery Without China?*, N.Y. TIMES (May 16, 2023), https://www.nytimes.com/interactive/2023/05/16/business/china-ev-battery.html.
[136] *Risks of Rush to Green Policies Hearing*, *supra* note 88 (written statement of Daniel Simmons, Principal, Simmons Energy and Environmental Strategies).

lithium.[137] By 2027, China is expected to be the world's largest controller of nickel.[138] Chinese domination further extends into the processing and refining of raw materials crucial for EV batteries. As the largest processor of copper, nickel, cobalt, lithium and rare earths, China processes between 35 and 85 percent of these minerals.[139] Similarly, as reported by *The New York Times,* of the world's total amount, China processes:[140]



The United States will continue to rely on China for the 2022-2026 timespan of the Clean School Bus Program. Refineries typically take two to five years to build, and training workers can further prolong that timeline.[141] For example, Australia's first lithium refinery was approved in 2016 but did not produce battery-grade lithium until 2022.[142] While there are efforts to expand domestic refining capacity in the United States, experts, such as Benny Freeman, a chemical engineering professor at the University of Texas at Austin, warn that they are "not going to be

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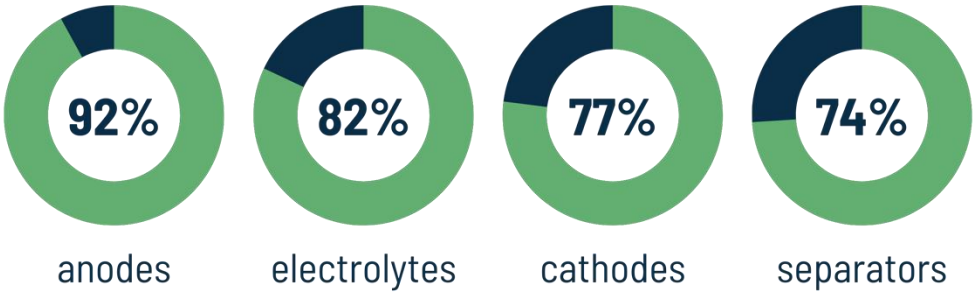
[137] See Harry Dempsey & Leslie Hook, *China Set to Tighten Grip Over Global Cobalt Supply as Price Hits 32-Month Low*, FIN. TIMES (Mar. 12, 2023), https://www.ft.com/content/abf28c9f-54e2-45c2-8dac-c5016bd31423; Sha & Alexandra Wexler, *China's Risky Strategy to Control One-Third of the World's Lithium Supply*, WALL ST. J. (May 24, 2023), https://www.wsj.com/articles/china-spends-billions-on-risky-bets-to-lock-down-worlds-lithium-39e174e8.
[138] Agnes Chang & Keith Bradsher, *Can the World Make an Electric Car Battery Without China?*, N.Y. TIMES (May 16, 2023), https://www.nytimes.com/interactive/2023/05/16/business/china-ev-battery.html.
[139] *Risks of Rush to Green Policies Hearing*, *supra* note 88 (written statement of Daniel Simmons, Principal, Simmons Energy and Environmental Strategies).
[140] Chang & Bradsher, *supra* note 138.
[141] *Id.*
[142] *Id.*

enough for critical metal independence to get away from China."[143] Experts have already warned that the existing dependence on China for critical mineral mining and processing a serious security vulnerability. In a hearing before the Environment Subcommittee, Dr. Michelle Michot Foss, a fellow with the Center for Energy Studies at Rice University's Baker Institute for Public Policy, warned that a hypothetical Chinese action to suspend its supply of critical minerals would be "traumatic" for American customers.[144]

Chinese domination of the EV supply chain continues with the production of battery components. China is estimated to produce 66 percent of all EV battery cells, along with significant percentages of four crucial battery components:[145]



In contrast, the United States only produces seven percent of the world's EV batteries[146] and one percent of cathodes, the battery's most important component.[147]

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[143] Clifford Krauss, *Exxon Mobil Plans to Produce Lithium in Arkansas*, N.Y. TIMES (Nov. 13, 2023), https://www.nytimes.com/2023/11/13/business/energy-environment/exxon-mobil-lithium-arkansas.html.
[144] *Securing Critical Materials Supply Chains Hearing*, *supra* note 89. (statement of Dr. Michelle Michot Foss, Fellow in Energy, Minerals, and Materials, Baker Institute for Public Policy, Rice University, in response to questioning from Rep. Rick Allen).
[145] Chang & Bradsher, *supra* note 138.
[146] INT'L ENERGY AGENCY, GLOBAL SUPPLY CHAINS OF EV BATTERIES 2 (2022), https://iea.blob.core.windows.net/assets/4eb8c252-76b1-4710-8f5e-867e751c8dda/GlobalSupplyChainsofEVBatteries.pdf.
[147] Chang & Bradsher, *supra* note 138.

China enjoys tremendous control over the mining, processing, and production of EV batteries, making cooperation with China necessary for an immediate electric vehicle transition. According to Sergey Paltsev, a senior research assistant at the Massachusetts Institute of Technology, "[the EV supply chain] is still going to be dependent on China for many, many years."[148]

Furthermore, the national security risks extend to other foreign adversaries. A *Washington Post* investigation found Chinese investors are working with Taliban authorities in Afghanistan, dubbed "the Saudi Arabia of lithium," to further strengthen their control over the EV supply chain.[149] Paul A. Brinkley, a former U.S. Deputy Undersecretary of Defense, stated that Chinese companies will mine lithium in Taliban-ruled Afghanistan and "ultimately sell it back to the West," thus enriching both China and the Taliban.[150]

ii. Human Rights Issues in the Supply Chain

Aside from the national security implications, the EV supply chain also involves disturbing human rights abuses. The production of ESB batteries, further incentivized by the Clean School Bus Program, draws resources from "places where environmental oversight is often poor, labor standards often lax, and the mining industry has a history of fueling conflicts with local communities."[151]

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[148] Aaron Steckelberg, et al., *The Underbelly of Electric Vehicles*, WASH. POST (Apr. 27, 2024), https://www.washingtonpost.com/world/interactive/2023/electric-car-batteries-geography/.
[149] Gerry Shih & Lorenzo Tugnoli, *Rich Lode of EV Metals Could Boost Taliban and its New Chinese Partners*, WASH. POST (July 20, 2023), https://www.washingtonpost.com/world/interactive/2023/ev-lithium-afghanistan-taliban-china/.
[150] *Id.*
[151] Stone, *supra* note 104.

The Democratic Republic of Congo is one of many countries that struggle with troubling labor practices.[152] In Congolese cobalt mines, poorly compensated workers labor for six days in a row with 12-hour shifts and only one break.[153] The unsafe conditions result in an extremely high rate of injury, leading to miners losing their homes and having to withdraw their children from school.[154] In South African manganese mines, irreversible poisoning has caused a wide array of neurological issues in workers.[155] One study found that 26 percent of miners in a mining town exhibited Parkinson's-like symptoms.[156] In Guinea, plans to expand bauxite mining has led to farmland and natural habitat in an amount of land totaling the size of Delaware being slated for destruction.[157] This is done with little or no compensation to local residents.[158] Dust from mining operations has destroyed crops, and rivers have become undrinkable due to runoff from mining roads.[159] In a story about Guinea's mining industry, the *Washington Post* reported:

> *The production of ESB batteries draws resources from "places where environmental oversight is often poor, labor standards often lax, and the mining industry has a history of fueling conflicts with local communities."*

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[152] *Securing Critical Materials Supply Chains Hearing, supra* note 89 (statement of Dr. Michelle Michot Foss, Fellow in Energy, Minerals, and Materials, Baker Institute for Public Policy, Rice University, in response to questioning from Rep. Jan Schakowsky).
[153] Katharine Houreld & Arlette Bashizi, *Despite Reforms, Mining for EV Metals in Congo Exacts Steep Cost on Workers*, WASH. POST (Aug. 4, 2023), https://www.washingtonpost.com/world/interactive/2023/ev-cobalt-mines-congo/.
[154] *Id.*
[155] Rachel Chason & Ilan Godfrey, *In Scramble for EV Metals, Health Threat to Workers Often Goes Unaddressed*, WASH. POST (June 8, 2023), https://www.washingtonpost.com/world/interactive/2023/ev-mineral-manganese-south-africa.
[156] *Id.*
[157] Rachel Chason & Chloe Sharrock, *On Frontier of New "Gold Rush," quest for Coveted EV Metals Yields Misery*, WASH. POST (Apr. 27, 2023), https://www.washingtonpost.com/world/interactive/2023/ev-battery-bauxite-guinea/.
[158] *Id.*
[159] *Id.*

"Aminata Bah, a grandmother of 11 who used to collect drinking water for her family[…] believes more villagers are falling sick because of the lack of clean water. 'Without water,' Bah said, 'there is no life.'"[160]

In China's Xinjiang Uyghur Autonomous Region, the Chinese government has engaged in efforts to forcefully assimilate the Uyghurs, a predominantly Muslim ethnic minority group, drawing international condemnation.[161] The CCP's actions against the Uyghur ethnic group have been described by the State Department as "ongoing genocide."[162] One facet of this program involves Uyghurs operating state-backed mines and mineral refineries as part of a sprawling forced labor program.[163] Uyghurs who refuse "voluntary" employment risk being sent to an internment camp.[164] State-owned companies order these workers to complete strict ideological training and encourage them to write letters to their hometown elders "expressing gratitude to the Communist Party."[165] Further, company leadership at one such refinery told its officials to "'work on the thinking' of families of transferred laborers to ensure that no one abandoned their jobs."[166] Despite attempts to prevent American companies from using products manufactured through Xinjiang forced labor, reporting from *The Washington Post* reveals "a complex web of suppliers and middlemen" concealing the true sources of materials from Xinjiang, which still

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[160] *Id.*
[161] *See* THOMAS LUM & MICHAEL WEBER, CONG. RESEARCH SERV., IF10281, CHINA PRIMER: UYGHURS 1 (2023); Press Statement, U.S. Mission to Int'l Orgs. in Geneva, UN Office of the High Commissioner for Human Rights Report on the Human Rights Situation in Xinjiang (Sept. 1, 2022), *available at* https://geneva.usmission.gov/2022/09/01/statement-on-un-human-rights-office-report-on-xinjiang/.
[162] Press Statement, U.S. Mission to Int'l Orgs. in Geneva, *supra* note 161.
[163] Ana Swanson & Chris Buckley, *Red Flags for Forced Labor Found in China's Car Battery Supply Chain*, N.Y. TIMES (Nov. 4, 2022), https://www.nytimes.com/2022/06/20/business/economy/forced-labor-china-supply-chain.html.
[164] *Id.*
[165] *Id.*
[166] *Id.*

work their way into American supply chains.[167] When asked if the United States was "increasingly relying on this type of forced labor abuses in China and elsewhere" during a hearing conducted by the Environment Subcommittee, witness Daniel Simmons, Principal at Simmons Energy and Environmental Strategies, responded "without a doubt."[168]

While the Clean School Bus Program did not create the problems that exist in the EV supply chain, the government-subsidized purchases of ESBs under the Clean School Bus Program further incentivizes them, further compounding the problem.

IV. Problems with the Clean School Bus Program

Both the Oversight Subcommittee and the EPA Office of Inspector General (OIG) have identified problems with the Clean School Bus Program. In September 2023, the Oversight Subcommittee held a hearing entitled "Making the Grade?: Audit of the Environmental Protection Agency's Clean School Bus Program," in which EPA Inspector General Sean O'Donnell testified about the OIG's work related to the Clean School Bus program.[169] In October 2023, the Oversight Subcommittee sent out the first round of questionnaires to sixteen randomly selected districts that participated in the 2022 Clean School Bus Rebate Program.[170] In December 2023, the EPA OIG released two reports following its investigation and audit of the Clean School Bus Program. In February 2024, the Oversight Subcommittee sent questionnaires to seventeen additional school districts that participated in the 2022 Clean School Bus Rebate Program. These assessments have revealed serious defects with the Clean School Bus Program,

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[167] *See* Evan Halper, *EV Makers' Use of Chinese Suppliers Raises Concerns About Forced Labor*, WASH. POST (Sept. 18, 2023), https://www.washingtonpost.com/business/interactive/2023/electric-vehicles-forced-labor-china/.
[168] *Risks of Rush to Green Policies Hearing*, *supra* note 88 (statement of Daniel Simmons, Principal, Simmons Energy and Environmental Strategies, in response to question of Rep. Bill Johnson).
[169] *OIG Oversight Hearing*, *supra* note 9.
[170] See Appendix.

including a lack of verification procedures, delays, irregular protocols, and prioritization of costly ESBs over cheaper low-emissions alternatives that do not pose the same level of environmental, supply chain, and human rights concerns presented by ESBs.

A. Lack of Verification Procedures Leads to Waste, Fraud and Abuse

In December 2023, the EPA OIG released its *Management Implication Report: Preventing Fraud, Waste, and Abuse Within the EPA's Clean School Bus Program*.[171] This investigation examined both the 2022 Rebate Program and the 2023 Grant Program, with the EPA OIG stating these findings would likely also be applicable to the 2023 Rebate Program.[172] The EPA OIG found the Clean School Bus Program to be "rife with potentially inaccurate information" and susceptible to waste, fraud, and abuse.[173] The OIG discovered that one applicant the EPA selected to receive funding was an administrative entity with zero students, ineligible under program guidelines.[174] This entity's publicly available National Center of Education Statistics profile identified it as an administrative entity.[175] Despite having no students, the EPA approved the request for a rebate.[176] The EPA disputed the OIG's finding, maintaining that this recipient was eligible under the statute.[177]

In a different case also involving a contractor applicant, the EPA OIG stated it had to conduct "six months of investigative work, including issuing subpoenas and conducting

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[171] ENVTL. PROT. AGENCY, OFFICE OF INSPECTOR GEN., 24-N-0013, MANAGEMENT IMPLICATION REPORT: PREVENTING FRAUD, WASTE, AND ABUSE WITHIN THE EPA'S CLEAN SCHOOL BUS PROGRAM (2023) [hereinafter OIG MANAGEMENT IMPLICATION REPORT], https://www.epaoig.gov/sites/default/files/reports/2023-12/_epaoig_20231227_24-n-0013_redacted_cert.pdf.
[172] *Id.* at 3.
[173] *Id.*
[174] *Id.* at 4.
[175] *Id.*
[176] *Id.*
[177] Letter from Tim Del Monico, Assoc. Adm'r, Envtl. Prot. Agency, to Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce 3 (May 14, 2024) (on file with the Committee).

interviews and surveillance," to obtain basic information such as the identity of the contractor.[178] The EPA OIG identified the lack of verification procedures as a serious problem with the Clean School Bus Program: "The EPA has no mechanism for verifying the accuracy or legitimacy of applicant information. It also has no process for following up during the period of performance to ensure that recipients meet their self-certifications and are eligible to participate in the Clean School Bus Program."[179] The report went on to state that the "the twin failures of no truthfulness attestation and no verification procedures has already placed IIJA funds at risk."[180]

The EPA OIG's report relayed that the EPA Office of Air and Radiation stated that neither the statutory text nor the EPA's internal guidance require applicants to expressly attest to the accuracy of their applications, and there is no requirement for an applicant to submit data proving their claims.[181] The EPA does not require applicants to sign attestations that their statements in their applications are correct.[182] The EPA solely relied on self-certified applications and the estimates of applicants, often without any corroborating documentation, to award billions of taxpayer dollars in funding. When the Committee requested more information from the EPA on its efforts to address the

[178] OIG MANAGEMENT IMPLICATION REPORT, *supra* note 171, at 4.
[179] *Id.* at 3.
[180] *Id.*
[181] *Id.*
[182] *Id. at 5.*

report's findings,[183] the EPA noted that the Clean School Bus Program guides contain a warning against making false representations in funding applications, and that the EPA would continue to emphasize the warning, including in key locations throughout the application process.[184]

The EPA OIG further found that some contractors applied on behalf of districts without the knowledge of these districts.[185] In some instances, the EPA allowed contractors to apply or initiate applications on behalf of eligible entities without their knowledge, only for the eligible entities to later withdraw the application made of their behalf.[186] For the 2023 Rebate Program, the EPA required a School Board Awareness Certification and School District Approval Letter "to set school districts up for success when making the transition to cleaner fleets and reduce future withdrawals," so school boards would be aware and approve any applications by outside entities on their behalf.[187] But self-certification persists in the 2023 Rebate Program: districts can self-certify as "prioritized" districts without submitting any documentation.[188] The EPA states that it "may contact the applicant during eligibility checks," but how often and by what means this may occur is unknown.[189]

On July 31, 2024, the EPA OIG issued an evaluation report entitled, *The EPA Needs to Improve Internal Controls for Selecting Recipients of Clean School Bus Program Funds,* which

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[183] Letter from Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce, et al., to Michael S. Regan, Adm'r, Envtl. Prot. Agency (Apr. 5, 2024), *available at* https://d1dth6e84htgma.cloudfront.net/04_05_2024_Letter_to_EPA_on_Clean_School_Bus_Program_3f37467bab.pdf.
[184] Letter from Tim Del Monico, Assoc. Adm'r, Envtl. Prot. Agency, to Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce 4 (May 14, 2024) (on file with the Committee).
[185] OIG MANAGEMENT IMPLICATION REPORT, *supra* note 171, at 4.
[186] *Id.*
[187] ENVTL. PROT. AGENCY, *supra* note 1, at 27; *see also* ENVTL. PROT. AGENCY, OFF. OF TRANSP. & AIR QUALITY, EPA-420-B-24-034, 2023 CLEAN SCHOOL BUS REBATES PROGRAM GUIDE: MAY 2024 UPDATE 18 (2023), *available at* https://www.epa.gov/system/files/documents/2024-05/420b24034.pdf.
[188] ENV'T. PROT. AGENCY, OFF. OF TRANSP. & AIR QUALITY, 2023 CLEAN SCHOOL BUS (CSB) REBATES PROGRAM PRIORITIZATION SELF-CERTIFICATION INSTRUCTIONS 1-2 (2023), https://www.epa.gov/system/files/documents/2023-09/fy23-csb-prioritization-self-cert-instruct-rebates-2023-09.pdf.
[189] *Id.* at 2.

uncovered further documentation issues.[190] The EPA OIG conducted this evaluation to determine whether the EPA followed requirements properly when selecting recipients for Clean School Bus Program funds.[191] The OIG found that, while EPA followed six of the seven requirements for selecting recipients, the agency "did not require applicants to provide documentation to demonstrate the eligibility of their existing or replacement school buses."[192]

For the 2022 Rebate Program, the OIG noted that the EPA only required vehicle titles and registrations to prove existing school buses were eligible to be replaced with Clean School Bus funding.[193] The OIG pointed out that vehicle identification numbers and vehicle titles "[do] not indicate whether a vehicle is operational."[194] The EPA required that existing buses to be replaced be operational at the time of application submission.[195]

The OIG further noted that "the EPA did not correct this deficiency when it launched its 2023 grant and rebate competitions,"[196] and "[t]hese issues remained largely unmitigated for the 2023 rebate and grant competitions."[197] For the 2023 Rebate Program, the EPA required that applicants "submit only vehicle titles for the existing school buses, not vehicle registrations."[198] For the 2023 Grant Program, the EPA required applicants to submit additional details about the buses they planned to replace, "including model year, fuel type, and Gross Vehicle Weight

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[190] ENVTL. PROT. AGENCY, OFFICE OF INSPECTOR GEN., 24-E-0050, THE EPA NEEDS TO IMPROVE INTERNAL CONTROLS FOR SELECTING RECIPIENTS OF CLEAN SCHOOL BUS PROGRAM FUNDS (2024) [hereinafter OIG INTERNAL CONTROLS REPORT], https://www.epaoig.gov/sites/default/files/reports/2024-07/report_no._24-e-0050_4.pdf.
[191] *See id.* at 1.
[192] *Id.* at 8.
[193] *Id.* at 11.
[194] *Id.*
[195] *Id.* at 2.
[196] *Id.* at 11.
[197] *Id.*
[198] *Id.*

Rating, but did not require copies of vehicle titles, registrations, or other supporting documentation."[199]

The OIG determined that "[s]elf-certification alone is insufficient for determining that an applicant has met Agency requirements,"[200] and that "if [t]he EPA does not fully follow selection requirements and verify that replacement buses will operate as intended, the potential for fraud, waste, and abuse increases."[201] The EPA's Office of Air and Radiation responded to the OIG's evaluation by agreeing with "the need for documentation to support bus replacement eligibility and the five year service requirement and will provide additional guidance to potential applicants in future funding opportunities about what materials to maintain to demonstrate bus eligibility in the event of an audit."[202]

B. Delay Issues

The EPA scheduled the first Clean School Bus Program funding round, the 2022 Rebate Program, to be fully completed by October 2024.[203] By this deadline, the EPA expects selectees to "receive new buses, install eligible charging infrastructure, replace old buses, and submit Close Out Forms."[204] In December 2023, the EPA OIG released a report entitled *The EPA Clean School Bus Program Could Be Impacted by Utility Delays,* which examined potential impediments to the rollout of the Clean School Bus Program.[205] While the EPA OIG found no significant issues affecting the EPA's disbursement of the 2022 Rebate Program funds, it found that the EPA did not

[199] *Id.*
[200] *Id.*
[201] *Id.* at 8.
[202] *Id.* at 23.
[203] ENVTL. PROT. AGENCY, *supra* note 24, at 2.
[204] *Id.* at 2.
[205] ENVTL. PROT. AGENCY, OFFICE OF INSPECTOR GEN., 24-P-0012, THE EPA CLEAN SCHOOL BUS PROGRAM COULD BE IMPACTED BY UTILITY DELAYS (Dec. 27, 2023) [hereinafter OIG UTILITY DELAYS REPORT], https://www.epaoig.gov/sites/default/files/reports/2023-12/_epaoig_20231227-24-p-0012_cert.pdf.

require applicants to coordinate with their utility companies before applying for rebates, and determined, as a result, the EPA "may be unable to effectively manage and achieve the program mission."[206] One utility company interviewed by the OIG stated it would take "nine months to two years to complete construction" of electrical infrastructure upgrades needed for the buses, while another source estimated needing 12 to 24 months "for establishing charging stations and connecting them to power lines."[207] The EPA OIG noted that the impact of utility issues would not be known until the 2022 selectees closed out their rebates, scheduled for October 2024.[208] However, EPA Inspector General Sean O'Donnell stated in his testimony to the Oversight Subcommittee that, as a consequence of this lack of coordination, "around one-third of [2022] rebate recipients requested additional time to coordinate with local utilities."[209]

With the EPA notifying selectees in October 2022 and expecting them to have their buses purchased and all infrastructure upgrades finished by October 2024,[210] longer delays for infrastructure upgrades could result in districts missing the EPA's deadline. The EPA has since sought to rectify this by requiring an Electric Utility Partnership Template for the 2023 Rebate Program in an attempt to minimize deployment delays resulting from electric infrastructure upgrades.[211] As with the School Board Awareness Certification and School District Approval Letter, the Oversight Subcommittee does not know whether or how the EPA independently verified the accuracy of the information submitted on these new forms.

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[206] *Id.* at 5.
[207] *Id.* at 7.
[208] *Id.* at 6.
[209] *OIG Oversight Hearing*, *supra* note 9 (oral statement of Sean O'Donnell, Inspector General, Environmental Protection Agency).
[210] OIG UTILITY DELAYS REPORT, *supra* note 205, at 3.
[211] ENVTL. PROT. AGENCY, *supra* note 1, at 27; *see also* ENVTL. PROT. AGENCY, *supra* note 187, at 18.

Whether due to infrastructure construction or other issues, several districts surveyed by the Oversight Subcommittee have experienced delays. In the summer of 2024, the Oversight Subcommittee sent follow-up questions to each surveyed school district to check the status of their buses.[212] As of August 1, 2024, with three months left until the EPA's October 2024 deadline for the 2022 Rebate Program, 27 of 33 districts surveyed by the Oversight Subcommittee responded to the Subcommittee's follow-up questions. Combined, slightly less than half of the buses requested by these districts, 148 of 311, had been delivered.[213]

Eight districts reported they did not consider the length of time it took to receive buses an issue, with one rural district reporting that the buses came "right on schedule,"[214] while six districts reported challenges and delays with bus procurement. Another rural district reported that "buses were delivered as expected, [but] electrical infrastructure and charger installations took MUCH longer than expected,"[215] an issue foreseen in the EPA OIG's report.

The Oversight Subcommittee also attempted to obtain more information from the EPA directly about the status of the buses for the 2022 Rebate Program.[216] In an April 5, 2024, letter, the Oversight Subcommittee sought a status update, asking the EPA, "As of the date of this letter, how many selectees under the 2022 Clean School Bus Rebate program have received their buses?"[217] The EPA declined to provide that information, instead replying, "As noted above, 2022

[212] Follow-ups were not sent to districts who had already reported receiving all their buses; their totals are included in the following numbers.
[213] Data from responses sent to Subcommittee.
[214] Response on file with Subcommittee.
[215] Response on file with Subcommittee [emphasis in original].
[216] Letter from Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce, et al., to Michael S. Regan, Adm'r, Envtl. Prot. Agency (Apr. 5, 2024), *available at* https://d1dth6e84htgma.cloudfront.net/04_05_2024_Letter_to_EPA_on_Clean_School_Bus_Program_3f37467bab.pdf.
[217] *Id.* at 4.

selectees have until October 2024 to receive delivery of buses. We anticipate having additional information to provide the Committee after that time."[218]

C. Program Imbalance

In structuring the Clean School Bus Program, the EPA favored ESBs over more cost-efficient, low emissions alternatives, such as buses running on CNG and propane. As a result, the EPA spent more money to replace fewer buses.

The IIJA stipulated that the EPA must award "50 percent [of funds] to replace existing school buses with zero-emission school buses; and 50 percent to replace existing school buses with clean school buses and zero-emission school buses."[219] The statute further defines zero-emission buses as those found by the EPA Administrator to produce zero exhaust emissions of certain air pollutants, and any greenhouse gas.[220] The IIJA defines clean school buses as those that the Administrator certifies reduces emissions and utilizes an alternative fuel or is a zero-emission school bus.[221] Put simply, half the Clean School Bus Program funds were to be for ESBs (the only school buses certified by the EPA as zero-emission) and the other half could be used for ESBs or propane and CNG buses (the only school buses certified by the EPA as being clean but not zero-emission buses).

The EPA structured the Clean School Bus Program to overwhelmingly incentivize ESBs over propane and CNG alternatives, funding substantially higher portions of the cost of ESBs

[218] Letter from Tim Del Monico, Assoc. Adm'r, Envtl. Prot. Agency, to Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce 4 (May 14, 2024) (on file with the Committee).
[219] Infrastructure Investment & Jobs Act, Pub. L. No. 117-58, § 71101.
[220] *Id.*
[221] *Id.*

than costs of propane and CNG buses. The following are the prioritized school district maximum funding levels the EPA established for the three types of buses:

Program	ESB Amount	CNG Amount	Propane Amount
2022 Clean School Bus Rebate[222]	$375,000	$45,000	$30,000
2023 Clean School Bus Grant[223]	$395,000	$45,000	$35,000
2023 Clean School Bus Rebate [224]	$345,000	$45,000	$35,000

For the 2022 Rebate Program, the average awarded ESB cost $381,190, while the average awarded propane school bus cost $150,774.[225] In an effort to place a thumb on the scale in favor of ESB applications, the EPA awarded school districts an amount around the cost of an average ESB, but covered only a fraction of the average cost of a CNG or Propane bus.

Additionally, the EPA encourages program applicants to choose ESBs over CNG and propane buses by not offering infrastructure funding for CNG and propane school buses. For all three rounds of the Clean School Bus Program to date, the EPA has only provided funds for ESB infrastructure upgrades, explicitly stating that no infrastructure funding would be available for CNG and propane buses.[226]

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[222] ENVTL. PROT. AGENCY, *supra* note 24, at 6. These numbers are for "Class 7+" buses, the most selected bus during the 2022 Clean School Bus Rebate Program. *See* ENVTL. PROT. AGENCY, *supra* note 1, at 16.
[223] ENVTL. PROT. AGENCY, *supra* note 1, at 24.
[224] *Id.* at 27.
[225] *Id.* at 26.
[226] ENVTL. PROT. AGENCY, QUESTIONS AND ANSWERS 2023 CLEAN SCHOOL BUS (CSB) REBATE PROGRAM, supra note 15, at 39; ENVTL. PROT. AGENCY, QUESTIONS AND ANSWERS: 2023 CLEAN SCHOOL BUS (CSB) GRANT PROGRAM, *supra* note 15, at 46; ENVTL. PROT. AGENCY, 2022 CLEAN SCHOOL BUS REBATES: QUESTIONS AND ANSWERS, supra note 15, at 39.

The total number of awarded buses by bus type reflects the results of the EPA's bias:

	ESBs	Propane	CNG	Total
2022 Rebate Program[227]				
Number of buses	2,272	116	6	2,394
Percent of total buses	94.9%	4.8%	0.3%	
2023 Grant Program[228]				
Number of buses	2,675	62	0	2,737
Percent of total buses	97.7%	2.3%	0%	
2023 Rebate Program[229]				
Number of buses	3,323	280	1	3,557
Percent of total buses	93.4%	7.9%	0.03%	

The Committee has pressed the EPA for more information on this imbalance.[230] In its responses, the EPA has stated that it is committed to adhering to the requirements of the statute, and that it received "an overwhelming demand" for electric buses.[231] The EPA also responded that it "recognizes the wide commercial availability of CNG and propane fuel and fueling station infrastructure, as well as the need to bolster a nationwide heavy-duty public charging network for electric buses."[232]

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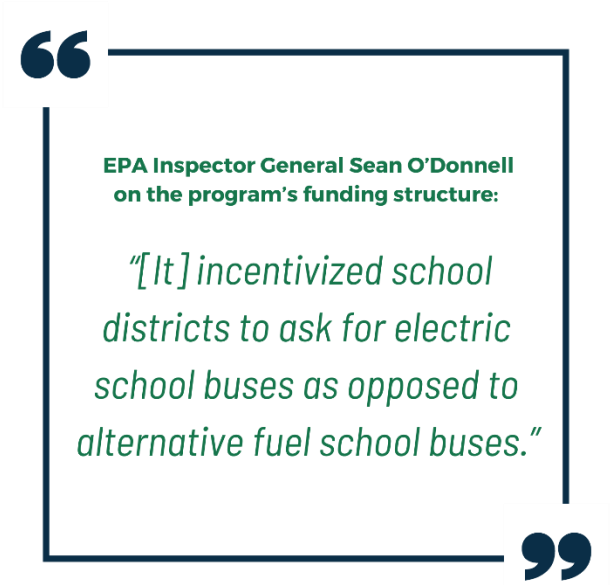
[227] ENVTL. PROT. AGENCY, *supra* note 1, at 13.
[228] ENVTL. PROT. AGENCY, *Clean School Bus 2023 Grants*, U.S. EPA, https://awsedap.epa.gov/public/extensions/Clean_School_Bus_2023/Clean_School_Bus_2023_Grants.html (last visited July 31, 2024).
[229] ENVTL. PROT. AGENCY, *Clean School Bus 2023 Rebates,* https://awsedap.epa.gov/public/extensions/Clean_School_Bus_2023/Clean_School_Bus_2023_Rebates.html (last visited July 31, 2024).
[230] Letter from Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce and Bill Johnson, Chair, Subcomm. on Envt., Mfg., and Critical Materials to Michael Regan, Adm'r, Envtl. Prot. Agency (Apr. 20, 2023); Letter from Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce, et al., to Michael S. Regan, Adm'r, Envtl. Prot. Agency (Apr. 5, 2024).
[231] Letter from Tim Del Monico, Assoc. Adm'r, Envtl. Prot. Agency, to Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce 2 (May 14, 2024) (on file with the Committee); Letter from Tim Del Monico, Assoc. Adm'r, Envtl. Prot. Agency, to Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce, and Bill Johnson, Chair, Subcomm. on Envt., Mfg., and Critical Materials (May 9, 2023) (on file with the Committee).
[232] Letter from Tim Del Monico, Assoc. Adm'r, Envtl. Prot. Agency, to Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce (May 14, 2024) (on file with the Committee).

School districts that the Oversight Subcommittee surveyed provided various reasons when asked why they sought funding for a particular type of bus. Several districts cited the environmental or emissions reductions benefits of ESBs; others pointed to state vehicle emissions mandates.[233] However, one district informed the Oversight Subcommittee that, among other reasons, they applied for ESBs over propane and CNG buses because "these were the buses that the award covered most of the cost of the bus."[234]

In a written response to the Oversight Subcommittee, the EPA has suggested this imbalance is a response to the desire of the applicants, citing that "more than 90 percent of buses that school districts requested were electric in the 2022 Clean School Bus Rebate program."[235] But this imbalance is expected given what Inspector General O'Donnell referred to as the "funding structure" that has "incentivized school districts to ask for electric school buses as opposed to alternative fuel school buses."[236] Unsurprisingly, because of the administration's choice to pay almost the full cost of an ESB, compared to the partial cost of a propane or CNG powered bus,



[233] Responses on file with Subcommittee.
[234] Response on file with Subcommittee.
[235] Letter from Tim Del Monico, Assoc. Adm'r, Envtl. Prot. Agency, to Cathy McMorris Rodgers, Chair, H. Comm. on Energy and Commerce 2 (May 14, 2024) (on file with the Committee).
[236] *OIG Oversight Hearing supra* note 9 (statement of Sean O'Donnell, Inspector General, Environmental Protection Agency in exchange with Kathy Castor, Ranking Member, Subcomm. on Oversight and Investigations, H Comm. on Energy and Commerce).

the nearly free buses are more popular than buses that cost school districts more of their own money.

V. CONCLUSION

As part of the administration's efforts to force a transition to electric vehicles, the EPA began the process of handing out billions of dollars through the Clean School Bus Program with the 2022 Rebate Program. However, vulnerabilities for waste, fraud, and abuse riddle this program.

While the EPA assisted schools with the purchase of expensive ESBs, electrifying its school bus fleet may not be a practical option for many school districts at this time for a variety of reasons, including lack of electrical infrastructure, the high costs of these vehicles and their limited range. While many tout the emissions reductions benefits of electric vehicles, including electric school buses, serious environmental costs accompany their proliferation, and any consideration of their benefits must include those consequences. Similarly, federal policies and programs such as the Clean School Bus program that incentivize a rapid shift to electric vehicles exposes the United States to supply chain vulnerabilities and empowers foreign adversaries that dominate most of the stages of battery production, namely China.

The EPA launched the Clean School Bus program without sufficient safeguards and considerations for practical hurdles applicants may face. For example, the EPA did not require documentation for some of the required application information and allowed contractors enthused at the opportunity to receive federal funding to apply on behalf of unknowing school districts, some of which eventually withdraw from the program. Additionally, the EPA failed to

account for the considerable electric infrastructure upgrades that electrifying a school bus fleet could require, potentially leading to delays for schools in utilizing their new buses.

Finally, though the EPA asserts it is conforming with the law, it has structured the program to heavily incentivize applicants to request electric school buses rather than other types of low emissions buses eligible for the program. By favoring electric school buses, the EPA discourages schools from pursuing other types of clean school buses that could better fit their needs.

The EPA's deadline for completion of the process and receipt of the buses from the first funding opportunity has not yet passed. Additionally, the EPA declined to provide an update on how many schools had received their buses. As such, it is difficult to conclusively assess the impact of the application process shortcomings and deployment challenges. The EPA has attempted to address some of these deficiencies in later rounds of funding opportunities, and it should continue to do so. The program demands careful monitoring and rigorous oversight due to associated vulnerabilities. Challenges with the program may become more apparent as the EPA distributes more funding, and more recipients attempt to utilize their new school buses. The Committee will continue engaging with the EPA and oversight partners such as the EPA Office of the Inspector General to push for the responsible and judicious use of taxpayer dollars.

VI. APPENDIX

To bolster its understanding of the Clean School Bus Program and assist with the creation of this report, the Oversight Subcommittee conducted a survey of school districts that received funds from the EPA under the first round of funding, the 2022 Clean School Bus Rebate Program. The following page is a list of the districts surveyed:

District	NCES ID	State	# of Buses	Amount Awarded	NCES Locale	Census Region
Albert City-Truesdale Community School District	1900031	IA	1	$395,000	Rural	Midwest
Baltimore City Public Schools	2400090	MD	25	$9,425,000	City	North
Beecher Community School District	2604500	MI	3	$1,185,000	Suburb	Midwest
Carter County	2101020	KY	23	$9,085,000	Rural	South
Chatham Central School District	3607110	NY	5	$1,885,000	Rural	North
Chickasha	4007560	OK	5	$1,975,000	Town	South
Colonial School District	1000230	DE	4 (3 electric, 1 propane)	$809,000	Suburb	North
Dallas ISD	4816230	TX	17	$6,715,000	City	South
DC Public Schools	1100030	DC	25	$7,625,000	City	South
Galesburg CUSD 205	1716080	IL	23	$9,085,000	Town	Midwest
Hesperia Unified	600014	CA	12	$3,660,000	Suburb	West
Isaac Elementary District	403960	AZ	6	$2,370,000	City	West
Jackson Public Schools	2619620	MI	21	$8,295,000	City	Midwest
Las Cruces Public Schools	3501500	NM	5	$1,975,000	City	West
Lawrence	2506660	MA	25	$9,875,000	Suburb	North
Lynchburg City Public Schools	5102340	VA	25	$9,875,000	City	South
Mohave Valley Elementary District	405190	AZ	7	$2,765,000	Town	West

District	NCES ID	State	# of Buses	Amount Awarded	NCES Locale	Census Region
Mondovi School District	5509780	WI	5	$1,975,000	Rural	Midwest
Montebello Unified	625470	CA	25	$9,875,000	Suburb	West
Monticello Central School District	3619740	NY	1	$395,000	Town	North
Neelyville R-IV	2921750	MO	1	$395,000	Rural	Midwest
New York City Geographic District #1	3600076	NY	25	$9,875,000	City	North
Newfield Central School District	3620790	NY	3	$1,185,000	Rural	North
Pittsburgh School District	4219170	PA	20	$6,460,000	City	North
Southern Tioga School District	4222370	PA	1 Propane	$30,000	Rural	North
Tekoa School District	5308790	WA	1	$395,000	Rural	West
Troy Area School District	4223790	PA	7	$2,765,000	Rural	North
Union County	1305250	GA	4	$1,580,000	Rural	South
Waconda	2004470	KS	4	$1,580,000	Rural	Midwest
Wasco Union Elementary	641400	CA	3	$1,185,000	Town	West
Wild Rose	5516710	WI	2	$790,000	Rural	Midwest
Windsor Central Supervisory Union	5099951	VT	3	$1,185,000	Rural	North
Wise County Public Schools	5104080	VA	5	$1,975,000	Town	South

Clean School Bus Survey (33 Districts in Total)

Oversight Subcommittee staff identified selected applicants from the list of selectees on the EPA's website.[237] The first round of letters was sent to 16 districts. The second round, with one additional question, was sent 17 new districts. This totaled 33 districts. Staff sought for the survey to include a random yet representative sample of the nation. To achieve wide representation, staff aimed to include a representative sample of school districts based on the following benchmarks (out of the initial plan for 30 districts):

- **Number of Buses**
    - 10 districts with 1-4 buses
    - 10 districts with 5-12 buses
    - 10 districts with more than 13 buses
- **National Center for Education Statistics Locale Classification**[238]
    - 10 "City" districts
    - 10 "Suburban" or "Town" districts
    - 10 "Rural" districts
- **Census Bureau Region**[239]
    - At least 7 districts in the West
    - At least 7 districts in the Midwest

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[237] ENVTL. PROT. AGENCY, *Awarded Clean School Bus Program Rebates*, https://www.epa.gov/cleanschoolbus/awarded-clean-school-bus-program-rebates (last visited July 31, 2024).
[238] NAT'L CTR. FOR EDUC. Statistics, *Locale Classifications*, https://nces.ed.gov/programs/edge/Geographic/LocaleBoundaries (last visited Apr. 22, 2024).
[239] U.S. CENSUS BUREAU, *Census Regions and Divisions of the United States*, https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf (last visited Apr. 22, 2024).

- At least 7 districts in the South
- At least 7 districts in the Northeast

The Committee's efforts to obtain information from one particular district – New York City Geographic District One[240] ("District") illustrates the types of challenges associated with documenting the use of taxpayer funds to purchase ESBs. After an initial email on October 31, 2023, with a letter from the Committee requesting information about the District's purchase of an ESB, the Committee inquired twenty-two separate times, including emails and phone calls requesting information. On April 17, 2024, and again on April 29, the Committee received emails that failed to answer most of the Committee's questions and requested that any further inquiries be directed to the contractors in charge of the bus program. The Committee made contact with the contractor for the District in May, which acknowledged receipt of the questions. As of August 5, 2024, the Committee has yet to receive any additional info about the District's use of the ESB purchased with taxpayer funds.

[240] Also known as "New York City Community School District 1."