State of Electric School Buses 2024

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Introduction

Each year, more than 490,000 school buses shuttle children back and forth across the United States --to school, field trips, sporting events and more.[1] As most of these buses burn diesel fuel,[2] children and drivers are exposed to harmful pollutants that are linked to asthma,[3] other health issues[4] and cognitive development problems.[5]

Conversely, electric school buses have zero tailpipe emissions, and therefore offer a cleaner, healthier alternative to diesel buses.[6] This report finds the number of these zero-emission vehicles are growing in school districts around the country, thanks in part to big investments from Congress and states to transition to electric school buses.

Federal Funding

As part of the Bipartisan Infrastructure Law, Congress authorized up to $5 billion to help school districts transition to electric school buses via the Clean School Bus Program (CSBP).[7] The program provides grant and rebate funding opportunities to school districts, nonprofit school transportation associations and tribal organizations to replace older, diesel buses with newer, electric or low-emission models.

The first round of funding applications under the new program solicited applications from May through August 2022,[8] and the EPA received approximately 2,000 applications requesting nearly $4 billion for 12,000 buses.[9] Due to the high demand, the agency nearly doubled its initial $500 million rebate pool.[10] The awards for that round of funding are shown below.

2022 Clean School Bus Rebate Program Awards

Awarded Rebate Applications	School Districts Awarded	EPA Rebate Funding Awarded	Total Buses To Be Replaced
368	368	$872,054,000	2,357

Source: EPA Clean School Bus Program Rebate Awards as of 8/15/24[11]

In 2023, the EPA opened a second funding opportunity through the 2023 Clean School Bus Grant Program, which provided grants rather than the previous rebate.[12] Winners were selected based on their applications and prioritizing high need and rural school districts.[13]

2023 Clean School Bus Grant Program Awards

Awarded Grant Applications	School Districts Awarded	EPA Grant Funding Awarded	Total Buses To Be Replaced
67	270	$965,000,000	2,737

Source: EPA Clean School Bus Program Grant Awards as of 8/15/24[14]

In September 2023 a third round of funding opened in the form of a rebate.[15] On May 29th, the EPA announced awards for the 2023 rebates,[16] shown in the table below.

2023 Clean School Bus Rebate Program Awards

Total Awards	Total School Districts	Total Awarded Funds	Total Buses To Be Replaced
556	556	$928,715,000	3,633

Source: EPA Clean School Bus Program Rebate Awards as of 8/15/24[17]

The Clean Heavy Duty Vehicles Grant Program

The Inflation Reduction Act sets aside $1 billion to fund the transition to zero-emission heavy duty vehicles including zero-emission Class 6 or Class 7 school buses via the Clean Heavy Duty Vehicles (CHDV) Grant Program.[18] This program was open to other heavy duty electric vehicles in addition to Class 6 and 7 school buses, including dump trucks, transit buses, delivery trucks and others.[19] Applications for grants opened in April 2024, and the application period closed in July 2024.[20] Information about awards for the CHDV program will be posted on the EPA Clean Heavy Duty Vehicle Program website.[21]

The EPA plans to notify grantees in November 2024 and award the grants in February 2025.[22]

State Funding

In addition to the EPA's monumental investment in the transition to electric school buses, states from across the country have adopted legislation of their own to support school districts in replacing older diesel buses with cleaner electric ones.

Below is a list of the top 10 states based on the total state and federal funding dedicated to electric school buses as of May 29, 2024.[23]

Federal and State Funding for Electric School Buses (5/29/24) - data from Atlas Public Policy		
Rank	**State**	**Total Funding**
1	California	$684,092,571
2	New York	$237,705,929
3	Illinois	$223,820,312
4	Texas	$184,792,970
5	Michigan	$167,740,803
6	Florida	$160,042,734
7	Georgia	$159,529,307
8	Louisiana	$144,141,664
9	Pennsylvania	$143,859,350
10	Massachusetts	$138,167,785

**Data from Atlas Public Policy, accurate through May 29, 2024. Does not include dollars from the 2023 Clean School Bus Grant Program that were categorized as a mix of fuel types.*

A complete list of states ranked by public funding for electric school buses can be found in Appendix A.

Number of electric school buses by state

Using data from the World Resources Institute's Electric School Bus Dashboard, the following table shows the status of total committed electric school buses (ESBs), awarded ESBs, ordered ESBs, delivered or operating ESBs, and the number of students riding ESBs for each state.[24] The World Resources Institute considered electric school buses "committed" while in any of the four stages of adoption: awarded, ordered, delivered or operating -- so long as "*a school district or fleet operator has been awarded funding to purchase it or makes a formal agreement to purchase to purchase it from a manufacturer -- not when they have only expressed intent to acquire one.*"[25]

At the time the data was collected in May 2024, 48 states had electric school buses delivered or in operation, with the exceptions of Wyoming and Idaho.[26]

As of August 1, 2024, the top states for committed electric school buses are listed below:

Top 10 states for committed electric school buses as of 8/1/2024

Rank	State	Committed ESBs	Awarded ESBs	Ordered ESBs	Delivered or operating ESBs	Students riding ESBs
1	California	**3,107**	726	1204	1,177	63,675
2	New York	**764**	566	80	118	4,853
3	Illinois	**609**	425	52	132	4,938
4	Florida	**467**	229	72	166	7,715
5	Pennsylvania	**460**	360	63	37	1,736
6	Maryland	**439**	53	50	336	30,254
7	Massachusetts	**434**	288	84	62	3,444
8	Texas	**424**	359	35	30	561
9	Virgina	**385**	83	66	236	16,174
10	Georgia	**341**	222	31	88	3,716

Source: Electric School Bus Data Dashboard, State ESB Adoption tab, World Resources Institute, data accessed 8/1/24[27]

States with the fewest committed electric school buses included Delaware, Alaska and Wyoming. For a complete ranking of committed electric school buses by state, see Appendix B.

Recommendations

Recommendations for school districts

- Set a goal to end the purchase of new fossil fuel buses and transition to a 100% zero-emission fleet. This can send an important market signal and help bring the school community together behind a single goal.
- Have an account on www.SAM.gov, which is a precursor to applying for federal funds. It is free to set up an account and three additional rounds of funding will be available through 2026.
- Explore all possible financing options:
    - Federal: EPA Clean School Bus Program,[28] National Electric Vehicle Infrastructure Formula Program[29] and EV Charging and Fueling Infrastructure Discretionary Grant Program.[30]
    - Look into state based financing options
- Start a conversation with your utility company as early as possible to see what resources they can provide. Many utilities offer consulting services to assess wiring and charging needs or rebates to reduce the costs of the wiring upgrades and infrastructure installation. In addition, work with your utility to ensure a competitive charging price system is in place.

Recommendations for lawmakers

- Dedicate dollars to zero-emission, electric school buses
- Identify and remove barriers to incentivize utility companies to develop effective and consistent rates for electric school bus charging, particularly around peak demand rates.
- Support research and development in electric school bus technology, including vehicle-to-grid[31] and vehicle-to-building technology.

Recommendations for utilities

- Continue to increase renewable energy capacity on the grid, making electric buses even cleaner.
- Develop turnkey programs to assist school districts in assessing their charging needs and providing incentives for charging infrastructure.
- Financially support research and development in electric school bus technology, including vehicle-to-grid and vehicle-to-building technology.
- Establish bulk purchase savings programs to lower costs for school districts.
- Create pricing structures that incentivize school districts to use vehicle-to-building and/or vehicle-to-grid opportunities from school buses

Recommendations for parents and students

- Call on your school board to convert to electric school buses by passing a resolution to transition the fleet to 100% electric buses and only purchase electric school buses moving forward.
- Share information about electric school buses at PTA meetings and other educational forums to increase understanding of the benefits for students and school districts. Organize an event where students, parents and the community can experience riding an electric school bus.
- Recruit volunteers to help with grant writing for smaller school districts to compete for this money.

Resources

- WRI Electric School Bus Data Dashboard - this free tool tracks the number of committed electric school buses across all 50 states
- EPA Clean School Bus Program website primary website that houses information about the EPA's rebate and grant programs for electric school buses
    - EPA 2023 Clean School Bus Program Cheat Sheet
- EPA Clean School Bus Rebate Program Awards Interactive Map and Data Table
- EPA Clean School Bus Grant Program Awards Interactive Map
- Clean Heavy Duty Vehicles Grant Program website

Appendix A

Federal and State Funding for Electric School Buses (5/29/24) - data from Atlas Public Policy[32]		
Rank	**State**	**Total Funding**
1	California	$684,092,571
2	New York	$237,705,929
3	Illinois	$223,820,312
4	Texas	$184,792,970
5	Michigan	$167,740,803
6	Florida	$160,042,734
7	Georgia	$159,529,307
8	Louisiana	$144,141,664
9	Pennsylvania	$143,859,350
10	Massachusetts	$138,167,785
11	Wisconsin	$127,931,889
12	North Carolina	$106,486,639
13	Ohio	$104,654,779
14	Virginia	$96,688,873
15	Minnesota	$93,502,994
16	Missouri	$93,358,781
17	Mississippi	$91,613,989
18	Oklahoma	$79,774,605
19	Colorado	$76,139,322
20	Arizona	$75,376,503
21	South Carolina	$73,935,000
22	Connecticut	$73,264,508
23	Washington	$69,208,805
24	Oregon	$63,962,000
25	New Jersey	$60,074,725

26	Indiana	$59,783,065
27	Tennessee	$57,629,250
28	Kansas	$41,570,000
29	Kentucky	$40,013,020
30	Arkansas	$38,605,000
31	New Hampshire	$34,865,000
32	Maryland	$33,986,421
33	Montana	$27,690,382
34	Nebraska	$26,735,000
35	Alabama	$25,242,558
36	Rhode Island	$23,470,000
37	West Virginia	$22,345,000
38	Maine	$20,550,000
39	Iowa	$20,500,000
40	North Dakota	$19,442,375
41	Utah	$19,155,660
42	Nevada	$17,579,604
43	District of Columbia (D.C.)	$14,450,000
44	Vermont	$11,972,791
45	New Mexico	$11,521,687
46	Idaho	$8,295,000
47	Hawaii	$4,844,660
48	South Dakota	$3,127,857
49	Delaware	$965,681
50	Alaska	$802,465
51	Wyoming	$0

Appendix B

Committed Electric School Buses Ranked by State as of 8/1/24[33]

Rank	State	Committed ESBs	Awarded ESBs	Ordered ESBs	Delivered or operating ESBs	Students riding ESBs
1	California	**3,107**	726	1204	1,177	63,675
2	New York	**764**	566	80	118	4,853
3	Illinois	**609**	425	52	132	4,938
4	Florida	**467**	229	72	166	7,715
5	Pennsylvania	**460**	360	63	37	1,736
6	Maryland	**439**	53	50	336	30,254
7	Massachusetts	**434**	288	84	62	3,444
8	Texas	**424**	359	35	30	561
9	Virginia	**385**	83	66	236	16,174
10	Georgia	**341**	222	31	88	3,716
11	Michigan	**315**	188	67	60	2,153
12	New Jersey	**306**	167	2	137	5,553
13	Louisiana	**283**	259	4	20	1,359
14	North Carolina	**263**	178	14	71	4,002
15	Oregon	**246**	189	14	43	2,048
16	Missouri	**229**	159	14	56	2,227
17	Washington	**222**	128	15	79	2,498
18	Connecticut	**211**	166	0	45	2,444
19	South Carolina	**195**	181	0	14	832
20	Arizona	**186**	161	7	18	756
21	Mississippi	**165**	107	0	58	2,610
22	Ohio	**165**	150	9	6	285
23	Colorado	**144**	70	28	46	2,070

24	Wisconsin	**141**	117	4	20	745
25	Oklahoma	**138**	62	11	65	2,925
26	New Hampshire	**117**	113	0	4	200
27	Indiana	**104**	65	4	35	1,352
28	Kentucky	**104**	47	6	51	2,219
29	Minnesota	**101**	88	4	9	325
30	West Virginia	**99**	52	37	10	470
31	Tennessee	**86**	41	26	19	1,059
32	Montana	**81**	64	1	16	334
33	Rhode Island	**79**	45	24	10	561
34	Arkansas	**78**	72	2	4	196
35	Maine	**78**	36	20	22	1,133
36	Alabama	**70**	48	14	8	331
37	Kansas	**64**	50	0	14	638
38	Iowa	**60**	41	1	18	671
39	Nevada	**57**	25	10	22	1,094
40	Vermont	**39**	21	1	17	847
41	Utah	**36**	14	0	22	1,270
42	New Mexico	**34**	23	5	6	464
43	Hawaii	**23**	20	0	3	149
44	Idaho	**23**	10	13	0	0
45	Nebraska	**23**	19	0	4	33
46	North Dakota	**18**	11	0	7	130
47	South Dakota	**8**	2	0	6	132
48	Delaware	**5**	3	1	1	82
49	Alaska	**2**	0	1	1	82
50	Wyoming	**0**	0	0	0	0

Source: Electric School Bus Data Dashboard, State ESB Adoption tab, World Resources Institute, data accessed 8/1/24

Appendix C

Committed electric school buses by state alphabetical as of 8/1/2024

State	Committed ESBs	Awarded ESBs	Ordered ESBs	Delivered or operating ESBs	Students riding ESBs
Alabama	70	48	14	8	331
Alaska	2	0	1	1	82
Arizona	186	161	7	18	756
Arkansas	78	72	2	4	196
California	3,107	726	1204	1,177	63,675
Colorado	144	70	28	46	2,070
Connecticut	211	166	0	45	2,444
Delaware	5	3	1	1	82
Florida	467	229	72	166	7,715
Georgia	341	222	31	88	3,716
Hawaii	23	20	0	3	149
Idaho	23	10	13	0	0
Illinois	609	425	52	132	4,938
Indiana	104	65	4	35	1,352
Iowa	60	41	1	18	671
Kansas	64	50	0	14	638
Kentucky	104	47	6	51	2,219
Louisiana	283	259	4	20	1,359
Maine	78	36	20	22	1,133
Maryland	439	53	50	336	30,254
Massachusetts	434	288	84	62	3,444
Michigan	315	188	67	60	2,153
Minnesota	101	88	4	9	325
Mississippi	165	107	0	58	2,610

Missouri	229	159	14	56	2,227
Montana	81	64	1	16	334
Nebraska	23	19	0	4	33
Nevada	57	25	10	22	1,094
New Hampshire	117	113	0	4	200
New Jersey	306	167	2	137	5,553
New Mexico	34	23	5	6	464
New York	764	566	80	118	4,853
North Carolina	263	178	14	71	4,002
North Dakota	18	11	0	7	130
Ohio	165	150	9	6	285
Oklahoma	138	62	11	65	2,925
Oregon	246	189	14	43	2,048
Pennsylvania	460	360	63	37	1,736
Rhode Island	79	45	24	10	561
South Carolina	195	181	0	14	832
South Dakota	8	2	0	6	132
Tennessee	86	41	26	19	1,059
Texas	424	359	35	30	561
Utah	36	14	0	22	1,270
Vermont	39	21	1	17	847
Virginia	385	83	66	236	16,174
Washington	222	128	15	79	2,498
West Virginia	99	52	37	10	470
Wisconsin	141	117	4	20	745
Wyoming	0	0	0	0	0

Source: Electric School Bus Data Dashboard, State ESB Adoption tab, World Resources Institute, data accessed 8/1/24[34]

[1] World Resources Institute, "The Electric School Bus Data Dashboard," accessed August 15, 2024, https://app.powerbi.com/view?r=eyJrIjoiYjkxMjhhYTktODJhYy00Y2U4LWExZjEtZWJlZTU5NDQzMDljIiwidCI6IjQ3NmJhYzFmLTM2YjItNGFkOS04Njk5LWNkYTZiYWQxZjg2MiIsImMiOjF9&pageName=ReportSection2d146044457bb0c096d2.
[2] *ibid.*
[3] Timothy K.M. Beatty and Jay P. Shimshack, "School buses, diesel emissions, and respiratory health," Science Direct, Journal of Health Economics, September 2011, https://www.sciencedirect.com/science/article/abs/pii/S0167629611000701#bib0190.
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[11] U.S. Environmental Protection Agency, "Clean School Bus Program Rebate Awards," accessed August 15, 2024, https://awsedap.epa.gov/public/extensions/Clean_School_Bus_2023/Clean_School_Bus_2023_Rebates.html.
[12] U.S. Environmental Protection Agency, "Clean School Bus Program Grants," accessed August 15, 2024. https://www.epa.gov/cleanschoolbus/clean-school-bus-program-grants.
[13] *Ibid.*
[14] U.S. Environmental Protection Agency, "Clean School Bus Program Grant Awards," accessed August 15, 2024, https://awsedap.epa.gov/public/extensions/Clean_School_Bus_2023/Clean_School_Bus_2023_Grants.html.
[15] U.S. Environmental Protection Agency, "Clean School Bus Program Rebates," accessed August 15, 2024, https://www.epa.gov/cleanschoolbus/clean-school-bus-program-rebates
[16] U.S. Environmental Protection Agency, "Biden-Harris Administration Announces Recipients of nearly $900 Million for Clean School Buses Under President's Investing in America Agenda," May 29, 2024, accessed August 15, 2024, https://www.epa.gov/newsreleases/biden-harris-administration-announces-recipients-nearly-900-million-clean-school-buses.
[17] U.S. Environmental Protection Agency, "Clean School Bus Program Awards," Funding Year 2023, accessed August 15, 2024, https://awsedap.epa.gov/public/extensions/Clean_School_Bus_2023/Clean_School_Bus_2023_Rebates.html.
[18] U.S. Environmental Protection Agency, "Clean Heavy-Duty Vehicles Grant Program," accessed August 15, 2024, https://www.epa.gov/clean-heavy-duty-vehicles-program/clean-heavy-duty-vehicles-grant-program.
[19] *ibid*.
[20] *ibid.*
[21] *ibid.*
[22] *ibid.*
[23] Data from Kelsey Blongewicz, Policy Analyst, Atlas Public Policy, personal communication, August 1, 2024.
[24] "Electric School Bus Data Dashboard," World Resources Institute, accessed August 15, 2024, https://electricschoolbusinitiative.org/electric-school-bus-data-dashboard.

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[27] "Electric School Bus Data Dashboard," World Resources Institute, State ESB Adoption tab, accessed August 15, 2024, https://app.powerbi.com/view?r=eyJrIjoiYjkxMjhhYTktODJhYy00Y2U4LWExZjEtZWJlZTU5NDQzMDljIiwidCI6IjQ3NmJhYzFmLTM2YjItNGFkOS04Njk5LWNkYTZiYWQxZjg2MiIsImMiOjF9&pageName=ReportSection2d146044457bb0c096d2
[28] U.S. Environmental Protection Agency, "Clean School Bus Program," accessed August 15, 2024, https://www.epa.gov/cleanschoolbus.
[29] U.S. Environmental Protection Agency, "Federal Funding Programs," accessed August 15, 2024, https://www.transportation.gov/rural/ev/toolkit/ev-infrastructure-funding-and-financing/federal-funding-programs.
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[31] James Horrox, Sarah Nix and Matt Casale, "Electric School Buses and the Grid," CALPIRG Education Fund, Environment California Research and Policy Center and Frontier Group, March 29, 2022, https://pirg.org/california/edfund/resources/electric-buses-and-the-grid/.
[32] Data from Kelsey Blongewicz, Policy Analyst, Atlas Public Policy, personal communication, August 1, 2024.
[33] "Electric School Bus Data Dashboard," World Resources Institute, State ESB Adoption tab, accessed August 15, 2024, https://app.powerbi.com/view?r=eyJrIjoiYjkxMjhhYTktODJhYy00Y2U4LWExZjEtZWJlZTU5NDQzMDljIiwidCI6IjQ3NmJhYzFmLTM2YjItNGFkOS04Njk5LWNkYTZiYWQxZjg2MiIsImMiOjF9&pageName=ReportSection2d146044457bb0c096d2.
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