

Get On The Bus

A 7-Step Checklist for School Districts to Transition to Electric School Buses



At a glance

School buses are the biggest fleet of public transit systems in the country. The industry transports 26 million students each day, covering millions of miles. Converting these buses from diesel to electric propulsion would make a huge difference for children's health and the environment.

CALSTART knows school district leaders have a lot on their plates and will need help and encouragement to make the transition, so we have broken this task down into seven easy steps.

For more support, reach out to CALSTART at

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CHECKLIST



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Step 1: Recognize that you don't have to go it alone.

Protecting children's health and reducing toxic air pollution and greenhouse gas emissions are priorities for the government at both federal and state levels. U.S., state, and local agencies and local electric utilities have dedicated funds to subsidize your transition to electric school buses (ESBs). Don't assume that because your district is strapped for cash that you can't make the switch. Your school district has willing partners waiting for you to raise your hand.

TIP: Start building alliances with local environmental and children's health groups to build awareness and excitement about the benefits from converting to ESBs; don't let the cost dissuade you from taking the first step.

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Step 2: Do your homework on subsidies.

Depending on where your school district is located, funding for ESB purchase subsidies may be available from a local air quality agency, the local electric utility, or state agencies that oversee air quality, transportation, or energy. There are probably programs for which your district is eligible. Shop around for the best deals.

TIP: Creating a spreadsheet of current ESB funding sources would be a great project to assign to a social studies class.

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Step 3: Learn your vehicle options.

ESBs are an established, tested, safe technology with a broad manufacturing base in North America. Every major school bus manufacturer has developed a zero-emission bus model. Talk with your bus sales representative to determine the buses that will meet your district's unique needs. For a wide selection of currently available ESBs, take a look at California's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) catalogue, which features 17 models eligible for vouchers, and Global Drive to Zero's Zero-Emission Technology Inventory (ZETI) tool.

TIP: School districts should assess future changes to ridership based on population trends in your communities. This assessment will help determine which ESB model will most likely fit your district's needs in the long term.

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Step 4: Think ahead about charging the batteries.

Charging can be the biggest challenge when transitioning a fleet. It's important to start planning early and consider the infrastructure and power needs, as well as training in safe operations. CALSTART recommends getting in touch with your local electric utility to see what programs are available to possibly pay for the chargers, the installation, and any additional build-out needed to power each charger; you can also learn what the utilities offer in special rates for charging vehicles.

TIP: Talk to the utility about the potential for a V2G (vehicle-to-grid) system that allows ESB fleets to manage charging and to generate revenue by acting as batteries for the electric grid. Because school bus duty cycles are fixed, the utility may be able to offer options to feed surplus power back into the local electricity grid to help offset the school district's operating costs. Talk with your local utility to see if this applies in your district—V2G options may still be in testing phases near you.

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Step 5: Pencil out the costs and savings.

Gather data on your current fleet's route mileage requirements, type of terrain, local climate data, and current fuel use to get a better picture of the potential return on your planned investment in ESBs and infrastructure. The purchase price of an ESB can be two or three times that of a new diesel bus, but the operating costs such as fuel and maintenance can be 80% lower than diesel. After factoring in the available subsidies, school districts will be able to calculate how a new, emission-free ESB can pay for itself over the lifetime of the vehicle.

TIP: Make sure to include training in your budget. CALSTART's case studies show that school districts save more money in operating costs when bus operators and maintenance staff are fully trained on efficient operations and charging protocols.

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Step 6: Rally Your Supporters Around ESB Benefits.

Embarking on fleet transformation is hard work and involves real money. School district budgets are often tight. So, parents, teachers, and voters might wonder: "Is transformation a priority?" The answer is yes because ESBs will bring:

- Reduced pollution and environmental impact.
- Improved student and public health.
- Decreased maintenance costs.
- The improved work environment for drivers due to less noise, fewer emissions, and eliminated diesel odors.
- Improved health and quality of life for drivers and maintenance staff.
- Reduced greenhouse gas emissions.

TIP: Because of all these benefits, your school district's transition to ESBs is a great PR opportunity to position the district as a leader on children's health and clean air. Plan to conduct outreach to local news outlets, social media, and presentations to civic organizations to make sure people in your community give you credit for this positive change.

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Step 7: Start today.

Transitioning to ESBs takes time and planning, including the steps outlined above. CALSTART recommends starting to research options now, even if your district isn't ready to convert this year. Local dealers can share information about ESBs' availability and new models being introduced. Also pay attention to your state's changing legal and regulatory posture. Some states are considering mandates for electric transportation in many sectors, including schools. Your district's readiness will pay off with opportunities to maximize savings and the ability to apply for funding opportunities, assuring a smoother, worry-free transition.

TIP: Contact CALSTART's school district hotline with any questions or concerns. We are here to help you make the transition! Please reach out to schoolbusteam@CALSTART.ORG.

