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# Workforce Development and Training Resources

These resources provide useful insights for workforce development and fleet transition planning at school districts. Note that some of these resources may require payment.

If you identify other useful resources that could be added to this page, please share them with us at [CleanSchoolBus@epa.gov](mailto:CleanSchoolBus@epa.gov) and include 'Workforce Resources' in the subject line.

[Electric School Bus Familiarization Training Videos](#) [↗](#) (Joint Office of Energy and Transportation)

## On this page:

- Curriculum and Training Resources
    - Operators
    - Bus Technicians
    - Electric Vehicle Supply Equipment Infrastructure
    - First Responders
    - Fleet Managers and Transportation Administrators
  - State and Local Examples
-

# Curriculum and Training Resources

- Workforce Planning Recommendations and Resources (pdf) (149 KB, February 2024, EPA-420-B-24-006)
  - EPA's Clean School Bus program is enabling school districts across the country to purchase new, cleaner vehicles to transport kids to school every day. The successful deployment of clean school buses requires a workforce that is well-prepared to operate and maintain the buses. This document outlines suggestions for how to prepare and empower your workforce for the transition to clean school buses.
- Workforce Development Resources\* [🔗 <https://driveelectric.gov/workforce-development>](https://driveelectric.gov/workforce-development) (Joint Office of Energy and Transportation)
  - The Joint Office has collated example resources to support workforce development activities for an equitable electrified transportation system to provide positive outcomes for Justice40 and underserved communities.
- Workforce Development Projects\* [🔗 <https://driveelectric.gov/news/workforce-development-ev-projects>](https://driveelectric.gov/news/workforce-development-ev-projects) (Joint Office of Energy and Transportation)
  - The Joint Office made available \$46.5 million from the Bipartisan Infrastructure Law for 30 projects across 16 states and Washington, D.C; these projects will support workforce development for charging infrastructure, along with many other aspects of enhancing EV infrastructure and extending the benefits of clean transportation to rural, urban, and tribal communities to improve equity.
- Electric School Bus Training Standards\* [🔗 <https://electricschoolbusinitiative.org/electric-school-bus-training-standards>](https://electricschoolbusinitiative.org/electric-school-bus-training-standards) (Electric School Bus Initiative)
  - Free peer-reviewed standards developed by industry experts for school districts, trainers, and instructors to develop or compare training programs for staff and people interacting with electric school buses, including bus riders, drivers, technicians, fleet managers, first responders, and more.
- Electric School Bus Education: Driver and Technician Training\* [🔗 <https://afdc.energy.gov/vehicles/electric-school-buses#driver-training>](https://afdc.energy.gov/vehicles/electric-school-buses#driver-training) (Alternative Fuels Data Center, U.S. Department of Energy)
  - Module discusses electric school bus driver and technician training, including why training is important and four basic levels of training.

## Operators

- Electric School Bus Training Connection: Best Driving Practices\* (Video) [🔗](#) (Virginia Clean Cities)
  - Brief two-minute video with an overview of key practices for driving an electric bus.
- Overview for Electric School Bus Operators\* [🔗 <https://driveelectric.gov/webinars/electric-school-bus-operators>](https://driveelectric.gov/webinars/electric-school-bus-operators) (Joint Office of Energy and Transportation)
  - A recorded panel discussion webinar where presenters demonstrated basics on electric buses, standard operations, controls, driving, and charging procedures and infrastructure.

## Bus Technicians

- Electric School Bus Technician Training Database\* [🔗 <https://electricschoolbusinitiative.org/electric-school-bus-technician-training-database>](https://electricschoolbusinitiative.org/electric-school-bus-technician-training-database) (Electric School Bus Initiative)
  - Database containing both online and in-person programs across 19 states, most of which are offered by community and technical colleges as part of certificate or degree programs; however, individual classes may be able to be taken. While the listed programs are not necessarily specific to school buses, the foundational knowledge in electric vehicles is largely transferrable. Common training topics include high voltage safety, battery energy storage, and electric vehicle propulsion.
- EV Training: Advanced Industry Training\* [🔗 <https://continue.weber.edu/professional/programs/evtraining/>](https://continue.weber.edu/professional/programs/evtraining/) (Weber State University)
  - Online and in-person courses on high-voltage safety and hybrid and electric-vehicle systems.
- Battery Electric Bus Familiarization\* [🔗 <https://www.transittraining.net/courseware/details/battery-electric-bus-familiarization>](https://www.transittraining.net/courseware/details/battery-electric-bus-familiarization) (Transit Training Network)
  - Three-part series to help transit bus technicians gain fundamental understanding of battery electric bus (BEB) technology. Recordings, slides, and presenter notes are available.

- **Competency-Based Occupational Framework for Transit Bus Technician (pdf)\*** [🔗](https://www.transportcenter.org/images/uploads/publications/cbof_full_framework_bus_technician.pdf)  [<https://www.transportcenter.org/images/uploads/publications/cbof\\_full\\_framework\\_bus\\_technician.pdf >](https://www.transportcenter.org/images/uploads/publications/cbof_full_framework_bus_technician.pdf) (955 KB, January 2018) (Urban Institute)
  - This Competency-Based Occupational Frameworks for transit bus technicians in registered apprenticeship programs defines the purpose of the occupation, the job functions that are carried out to fulfill that purpose, the competencies that enable the apprentice to execute those job functions well, and the performance criteria that define the specific knowledge, skills and personal attributes associated with high performance in the workplace. It features knowledge of electrical and electronics principles.

### **Electric Vehicle Supply Equipment Infrastructure**

- **Electric Vehicle Infrastructure Training Program\*** [🔗](https://evitp.org/training/)  [<https://evitp.org/training/>](https://evitp.org/training/) (EVITP)
  - Electricians installing, operating, or maintaining EVSE purchased through the Clean School Bus Grant and Rebate Programs must be certified by EVITP or another training program approved by EPA.
- **xEV Electrical Safety Awareness Certification\*** [🔗](https://www.ase.com/ev)  [<https://www.ase.com/ev>](https://www.ase.com/ev) (Automotive Service Excellence)
  - ASE’s high voltage safety certification is the predominant certification for servicing technicians in both light- and heavy-duty vehicles.

### **First Responders**

- **First Responder Alternative Fuel Vehicles Training Program\*** [🔗](https://www.nfpa.org/for-professionals/training-for-me/alternative-fuel-vehicles-training/electric-vehicles)  [<https://www.nfpa.org/for-professionals/training-for-me/alternative-fuel-vehicles-training/electric-vehicles>](https://www.nfpa.org/for-professionals/training-for-me/alternative-fuel-vehicles-training/electric-vehicles) (National Fire Protection Association)
  - Web-based learning modules for personnel with responsibilities dealing with fires and other situations involving alternative fuel vehicles.

### **Fleet Managers and Transportation Administrators**

- **EV Training Series\*** [🔗](https://www.energy.gov/femp/electric-vehicle-training)  [<https://www.energy.gov/femp/electric-vehicle-training>](https://www.energy.gov/femp/electric-vehicle-training) (Federal Energy Management Program)
  - Four-part course developed by the National Renewable Energy Laboratory and the FEMP Fleet team. This series is designed to provide fleet managers and coordinators with knowledge to become subject matter experts in EV implementation.

- **Providing Training for Zero Emission Buses: Recommended Expanded RFP Language\*** (pdf) [🔗](https://www.transportcenter.org/images/uploads/publications/itlc_zeb_report_final_2-11-2022.pdf)  
<https://www.transportcenter.org/images/uploads/publications/itlc\_zeb\_report\_final\_2-11-2022.pdf> (17.7 MB) (International Transportation Learning Center and Jobs to Move America)  
– This document is intended to be used as a starting point for agencies to tailor their training procurement to suit their specific needs.
- **EV Workforce Collaborative\*** [🔗](https://www.nga.org/projects/ev-workforce-collaborative/) <https://www.nga.org/projects/ev-workforce-collaborative/> (National Governors Association and National League of Cities)  
– Collaborative initiative to help cities and states align policy and funding and develop accessible career pathways in the EV sector.

## State and Local Examples

- **Training Technicians for an Electric Bus Fleet\*** (pdf) [🔗](https://www.apta.com/wp-content/uploads/training-technicians-for-an-electric-bus-fleet_web_handout.pdf) <https://www.apta.com/wp-content/uploads/training-technicians-for-an-electric-bus-fleet\_web\_handout.pdf> (1.2 MB, October 22, 2019) (American Public Transportation Association)  
– Examples of how transit agencies are approaching the safety, technical, and skills gap when deploying battery and fuel cell bus technology.
- **John F. Kennedy High School Electric Vehicle Program\*** [🔗](https://www.cpradio.org/articles/2023/12/11/as-california-transitions-to-electric-vehicles-a-sacramento-high-school-will-start-training-students-as-ev-technicians/)  
<https://www.cpradio.org/articles/2023/12/11/as-california-transitions-to-electric-vehicles-a-sacramento-high-school-will-start-training-students-as-ev-technicians/>  
– Three-year program curriculum at Sacramento high school preparing students for careers as EV technicians.
- **Workforce Strategies for Clean School Buses\*** (pdf) [🔗](https://wdiny.org/portals/0/workforce%20strategies%20for%20clean%20school%20buses%20%28wdi%202022%29.pdf)  
<https://wdiny.org/portals/0/workforce%20strategies%20for%20clean%20school%20buses%20%28wdi%202022%29.pdf> (722 KB) (Workforce Development Institute)  
– A summary workforce needs assessment of school bus electrification in New York State. More information from WDI about their efforts in New York [🔗](https://eschoolbusworkforce.org/)  
<https://eschoolbusworkforce.org/>.

- NYC MTA Zero-Emission Bus Transition Plan\* (pdf) [🔗](https://new.mta.info/document/91336)  
<<https://new.mta.info/document/91336>> (2.0 MB, May 2022) (Metropolitan Transportation Authority)
  - Outlines the expected impacts to existing staff roles and responsibilities, describes new skill requirements, and lays out a plan to provide training and support. Reference pages 32-35 for relevant information on workforce development.

**\*Please note:** *This resource is developed and maintained by external organizations. EPA is not responsible for updating or verifying accuracy of the information on the linked pages.*

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