



Thank you for joining.

Today's meeting will start at 1:02 p.m. to allow time for participants to enter the meeting.

# Work Group #2 to Discuss the SB 114 Grants for Zero-Emission School Buses and Infrastructure

April 3, 2024



**Elizabeth Menchaca-Guhl**  
**Energy Analyst**  
**California Energy Commission**

**Manuel Aguila**  
**Air Pollution Specialist**  
**California Air Resources Board**





# Housekeeping



- Zoom recording
- Attendee list
- Muting on Zoom
- Questions & answers, chat function, email submissions
  - [cleansubmissions@arb.ca.gov](mailto:cleansubmissions@arb.ca.gov)



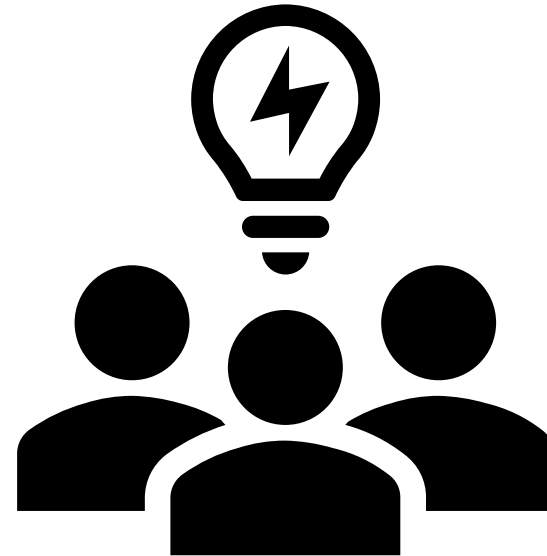
# Agenda



1. Work group goals
2. Poll questions
3. Zero-Emission School Bus and Infrastructure grant background
4. Eligible applicants and proposed application priority
5. Proposed award amounts and eligible costs
6. Technical assistance and workforce development
7. Proposed award requirements
8. Application proposals
9. Next steps



# Work Group Goals





# Work Group Goals



1. Summarize legislative requirements for the Zero-Emission School Bus and Infrastructure (ZESBI) grants
2. Present proposed program design for ZESBI grants
3. Receive feedback from attendees on program proposals



# Poll Questions





# Poll Question #1



## What type of organization do you represent?

- School district or local educational agency
- Third-party school transportation provider
- Local or regional government
- Federal agency
- Public attendee
- School bus dealer/manufacturer
- Consultant
- Utility provider
- Non-profit/community organization
- Other





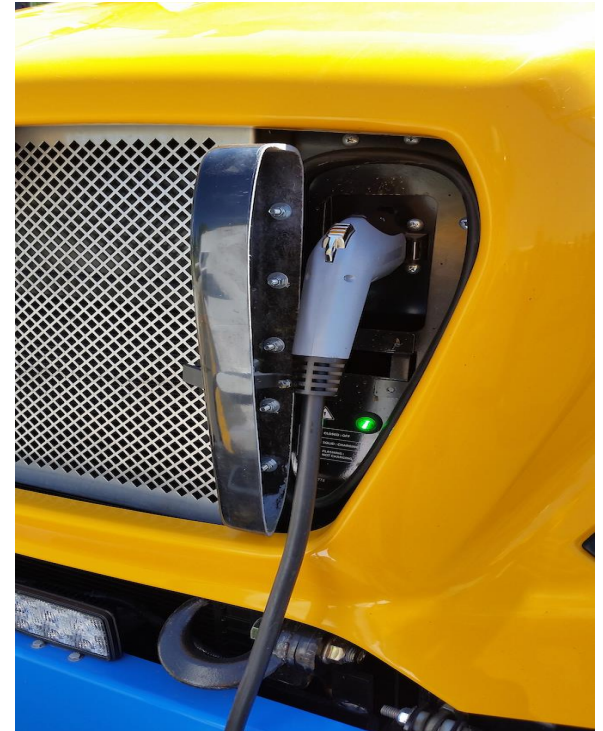


# Poll Question #2



**Does your school district or local educational agency currently own or operate any zero-emission (ZE) school buses?**

- Yes
- No, but we plan to purchase one soon
- No
- Not Sure
- I do not represent a school district





# Zero-Emission School Bus and Infrastructure (ZESBI) Grants Background





# ZESBI Funding Background



- [SB 114 \(Committee on Budget and Fiscal Review, Section 121 of Chapter 52, Statutes of 2022\)](#)
- Replacement of heavy-duty internal combustion engine (ICE) school buses owned by local educational agencies with ZE school buses and supporting charging or fueling infrastructure
- Part of the \$1.5 billion appropriated in the 2022 budget and amended in the FY 2023-24 budget



# Available Funding



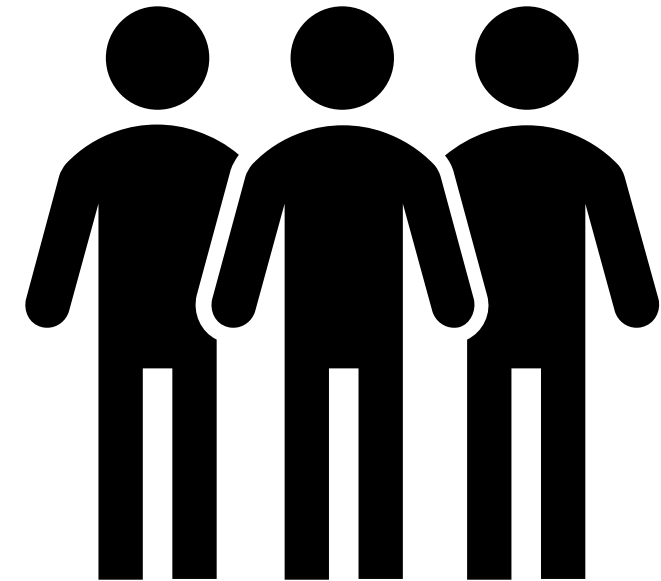
A total of **\$500 Million** is appropriated from SB 114 for ZESBI grants in the 2023-2024 Fiscal Year (FY).

Agency (Program)	Purpose	Amount of Funding
California Air Resources Board (HVIP)	Purchase of ZE school buses	\$375 Million
California Energy Commission (CALSTART*)	Purchase of charging or fueling infrastructure, and associated costs	\$125 Million

\*Conditionally awarded. Subject to approval by CEC at April 10, 2024 Business Meeting.



# Eligible Applicants and Proposed Application Priority





# Anticipated Future Funding



The California Legislature has indicated its intent to continue to fund ZESBI grants after the 2023-2024 FY.

Fiscal Year	Anticipated Funding
2024 - 2025	<ul style="list-style-type: none"><li>• \$375 Million to CARB for ZE school buses</li><li>• \$125 Million to CEC for supporting infrastructure</li></ul>
2025 - 2026	<ul style="list-style-type: none"><li>• \$375 Million to CARB for ZE school buses</li><li>• \$125 Million to CEC for supporting infrastructure</li></ul>



# Eligible Applicants



"Local Educational Agency" (LEA):

- Public School Districts
- County Offices of Education (COE)
- Joint Powers Authority (JPA)
- Charter Schools\*

\*Not eligible if designated as a "non classroom-based charter school"  
as of FY 21-22



# Priority Grantees



1. Small school districts
  - Less than 2,501 units of average daily attendance (CALPADS)
2. Rural school districts
  - Local codes 31, 32, 33, 41, 42, or 43 (NCES)
3. LEAs serving a high percentage of unduplicated pupils (UPC)
  - English learner, eligible for a free or reduced-price meal, or is a foster youth (California Education Code)
  - **Proposal: Define "high" UPC as  $\geq 80\%$  UPC**





# Proposed Applicant Priority



Tier 1

In a rural OR small school district OR high UPC

Tier 2

Located in Low Income or Disadvantaged Community

Tier 3

Statewide

Note: Applications will be timestamped.  
Applications will be awarded on a first come, first served basis within tiers.



# Proposed Supplements to Priority Grantee Definitions



- Low-income or disadvantaged communities (LI/DAC)
  - Low-income: Census tracts with median household incomes at or below 80% of the statewide median income
  - Disadvantaged: Census tracts receiving the highest 25% of overall scores in CalEnviroScreen 4.0
  - Additional definition information can be found at:  
<https://www.caclimateinvestments.ca.gov/priority-populations>
- Self-certification
  - As small or rural school districts, when data from CALPADS and NCES is incomplete or missing



# Feedback Received



Feedback	Response
<p>LEAs located in large air districts have been excluded from previous incentive opportunities despite having low-income and pollution burdened communities with high need for ZE school buses within them.</p>	<p>Although SB 114 does not grant low-income or pollution burdened communities priority grantee status, CARB and CEC have proposed a second priority tier to address these needs.</p>
<p>Consider self-certification for priority applicants.</p>	<p>Self-certification may be allowable if data from CALPADS or NCES is missing or incomplete.</p>

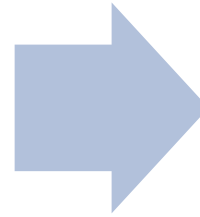


# Proposed School Bus Eligibility



## Replaced School Bus

- Internal combustion engine (any fuel type)
- Model year (MY) 2010 or older
- GVWR > 10,000 lbs.
- Must be scrapped within 24-months of receipt of new ZE school bus



## New School Bus

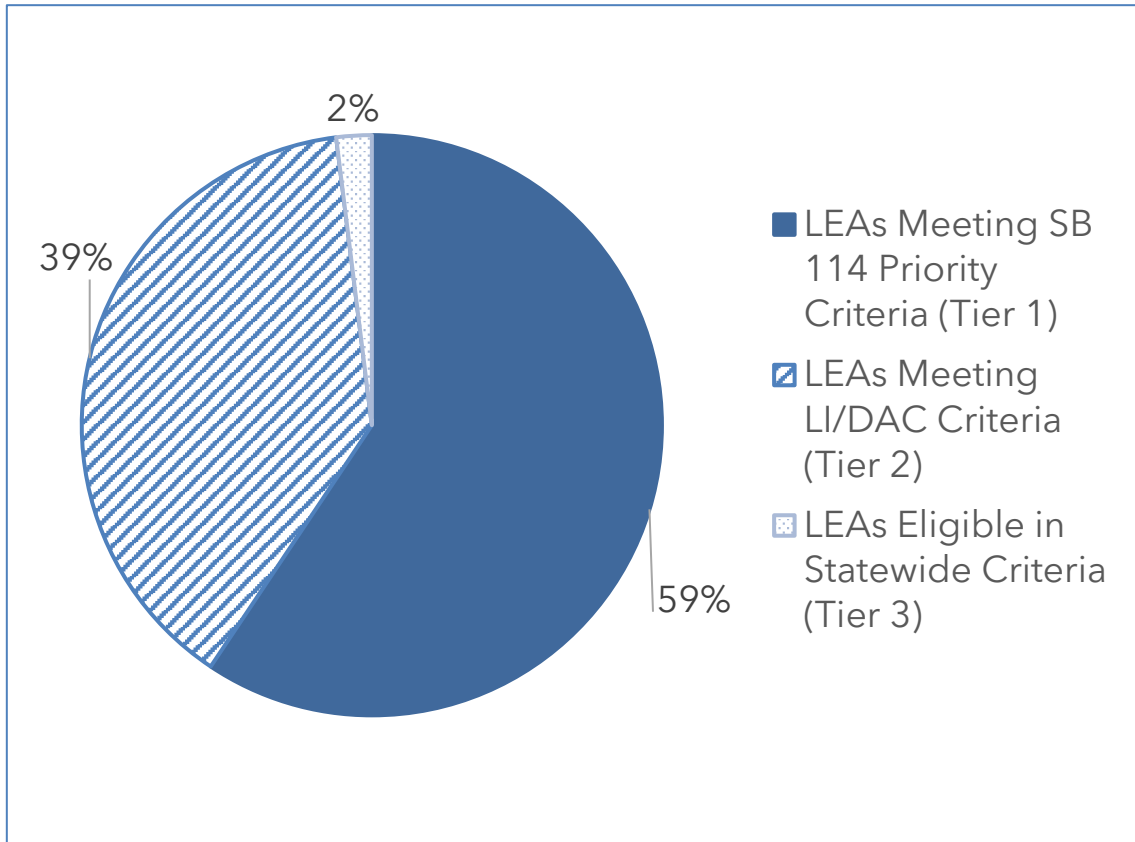
- Zero-emission
- Capable of bi-directional electricity flow



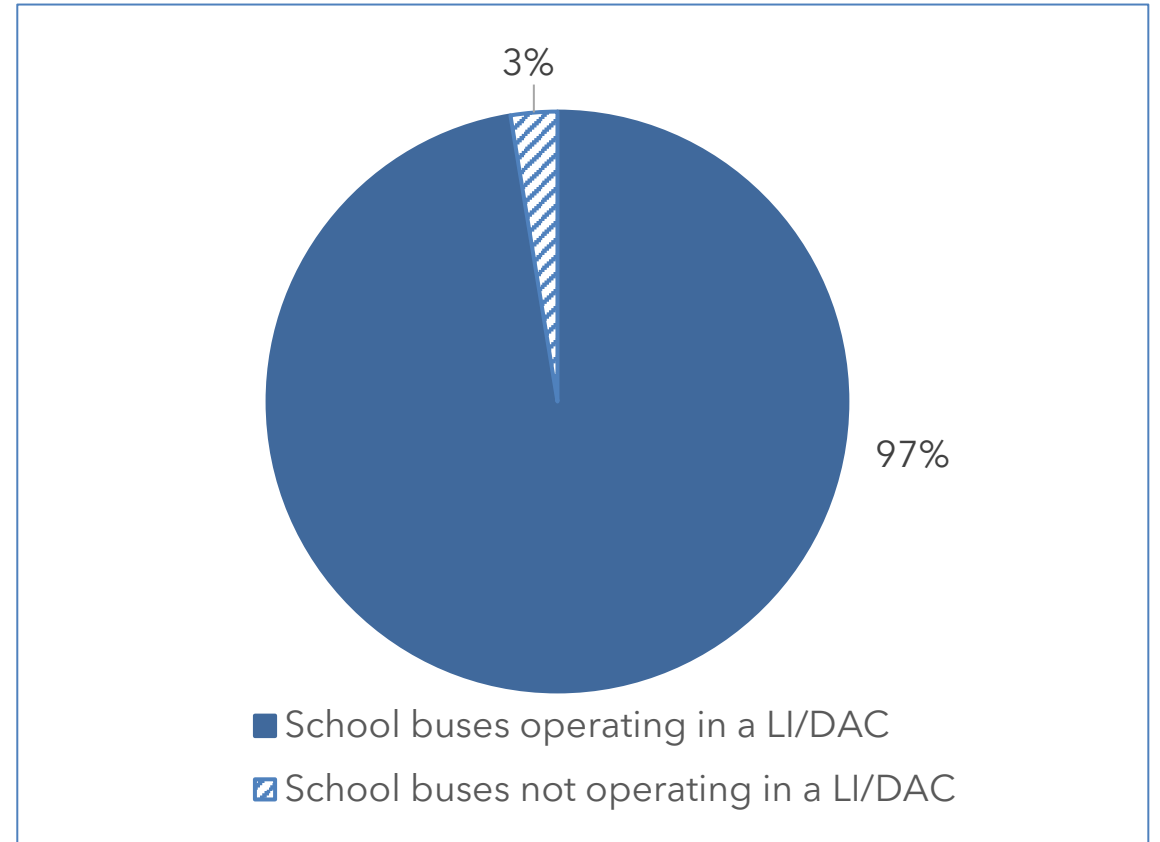
# Statewide Priority Landscape



## LEA Priority Breakdown



## LEA Eligible School Bus Breakdown by LI/DAC





# Discussion 1:



- Are there any questions or feedback related to the proposals for:
  - Priority grantees
  - Applicant priority tiers
  - School bus eligibility



Use the raised hand function (#2 if calling in by phone)



Please state your name and affiliation before asking a question or making a comment



---

# Proposed Award Amounts and Eligible Costs





# Award Breakdown



- **At least 90%** of the grant award to be spent on ZE school buses and supporting charging infrastructure
- **At most 10%** of the grant award can be spent on the LEA's school transportation program
  - Grant awards should supplement, not supplant, existing services and funds provided by grantees in support of transportation programs





# Feedback Received



Feedback	Response
Allow for upfitting or retrofitting diesel or alternative fuel buses to electric vehicles using third-party configurations.	It is staff's understanding that retrofitting or upfitting ICE school buses is better suited for buses that are 5 - 7 years old. ZESBI funding is proposing to focus on older school buses to reduce emissions from aging school buses in the state.
Is this funding able to be stacked with HVIP funding?	Funding is not able to be stacked with other HVIP funds. Grantees may be able to stack funds with other local air district funds.
Include sales tax as an eligible cost.	Sales tax will be an eligible cost and may be covered up to the maximum grant award amount.
Are third-party transportation agencies eligible?	The legislation that authorizes the ZESBI grants program requires funds be disbursed directly to public LEAs for the replacement of existing school buses. As third-party transportation providers are not public LEAs, they would not be an eligible grantee.



# Statewide Procurement Contract



## ZE School Bus Base Prices Under Procurement Contract

	<b>BYD</b> <b><u>1-23-23-18A</u></b>	<b>Phoenix</b> <b><u>1-23-23-18B</u></b>	<b>Navistar</b> <b><u>1-23-23-18A</u></b>	<b>Blue Bird</b> <b><u>1-23-23-18D</u></b>	<b>Lion Electric Co</b> <b><u>1-23-23-18E</u></b>
<b>Type A</b>	\$306,030	\$261,867	-	-	-
<b>Type A with Wheelchair Lift</b>	\$316,130	\$267,326	-	-	-
<b>Type C</b>	-	-	\$328,274	\$406,154	\$344,798
<b>Type C with Wheelchair Lift</b>	-	-	\$353,753	\$428,879	\$352,052
<b>Type D</b>	\$417,130	-	-	\$435,262	\$360,626
<b>Type D with Wheelchair Lift</b>	\$436,320	-	-	\$454,503	\$368,736

Any California LEA or government can utilize the contract to purchase ZE school buses.

More information available at:

<https://www.dgs.ca.gov/PD/Resources/Find-EPP-Goods-and-Services/Transportation/Vehicles>



# Eligible School Buses



- To be eligible for funding, the school bus original equipment manufacturer (OEM) must be in the HVIP eligible vehicles catalog
- Every school bus model awarded a ZE school bus statewide procurement contract is eligible for funding
- Grantees are NOT required to utilize the ZE statewide procurement contract



# Proposed Bus Award Amounts



Bus Type	Proposed Maximum Incentive Amounts
Type A Without Lift	<b>\$280,000</b>
Type C Without Lift	<b>\$340,000</b>
Type D Without Lift	<b>\$360,000</b>
"Plus-Up" for Each Bus Type with Wheelchair Lift	<b>\$15,000</b>



# Feedback Received



Feedback	Response
<p>Infrastructure awards should cover costly site upgrades, such as transformers and switch gears, and smart charging software.</p>	<p>SB 114 requires that at least 90% of an LEA's grant award be spent on the purchase of a ZE school bus and supporting charging infrastructure, which includes but is not limited to, charging or fueling stations, equipment, site design, construction, and related infrastructure upgrades.</p>



# Proposed Eligible Infrastructure Costs



Eligible Cost Category	Examples (Including But Not Limited To)
Procurement costs*	<ul style="list-style-type: none"><li>• Charging or fueling stations</li><li>• Electric vehicle supply equipment (EVSE)</li></ul>
Installation costs	<ul style="list-style-type: none"><li>• Construction</li><li>• Project management</li><li>• Site design</li><li>• Site upgrades (transformers, breakers, stub outs)</li><li>• Technical assistance</li></ul>
Other costs**	<ul style="list-style-type: none"><li>• Distributed energy resources</li><li>• Extended warranties</li><li>• Mobile chargers</li><li>• Software subscriptions</li></ul>

\*Eligible equipment will be included in the Implementation Manual.

\*\*Procurement and installation costs must be fully covered before these other costs become eligible. LEA can use the 10% school transportation program funding to cover these costs.



# Proposed Infrastructure Award Amounts



## Award Amount Per Charger

Charger Type	Infrastructure Award Amount
Level 2 (L2)	\$20,000
Direct Current Fast Charger (DCFC)	\$75,000
Bi-directional	\$95,000

## Award Criteria

- 1 ZESBI funded bus : 1 ZESBI funded charger
- Infrastructure award amount will be based on the type of charger with a maximum infrastructure award of \$75,000 per bus
  - Exception: If an LEA is awarded 1 bus and requests a bi-directional charger, LEA will be eligible for \$95,000
  - Additional examples provided on next slide
- Equipment standards will be included in the Implementation Manual



# Proposed Infrastructure Award Amounts



## Infrastructure Award Amount

Charger Type	Infrastructure Award Amount*
L2	\$20,000
DCFC	\$75,000
Bi-directional	\$95,000

## Example

- If an LEA is awarded 3 ZESBI buses, they will be eligible for at most a \$225,000 infrastructure award. The actual award amount will depend on the selection of chargers.
- Some possible charger combinations include:
  - 2 L2 chargers + 1 bi-directional charger = \$135,000 award
  - 1 L2 charger + 1 DCFC + 1 bi-directional charger = \$190,000 award
  - 1 L2 charger + 2 bi-directional chargers = \$210,000 award
  - 3 bi-directional chargers = \$225,000 award\*

\*LEA can use the 10% school transportation program funding to cover the remaining infrastructure costs.





# Funding Available for School Transportation Programs



Up to 10% of the total grant award can be used to supplement an LEA's school transportation program.

**Example: LEA awarded grant for 1 Type D school bus with wheelchair lift and 1 DCFC.**

<b>90%</b>	}	\$360,000	base grant for school bus
		\$ 15,000	for wheelchair "plus-up"
		<u>+ \$ 75,000</u>	<u>infrastructure award</u>
		\$ 450,000	combined school bus and infrastructure award
<b>10%</b>	}	<u>+ \$ 50,000</u>	<u>school transportation funding</u>
		\$ 500,000	total ZESBI award



# Proposed Eligible Costs for School Transportation Programs



Including but not limited to...

## Transportation Infrastructure

- Charger upgrades/repairs
- ZE short term/temporary charging

## Transportation Vehicles

- ZE school bus upgrades/repairs
- ZE fleet planning services

## Transportation Department Electrical System

- Electrical system upgrades to transportation yards

## Transportation Department Buildings

- Office equipment
- Security cameras and systems

## Transportation Department ZE Workforce Training (Beyond CEC Program)

- Driver training
- Transportation staff training
- Travel to training

## Transportation Shop Equipment

- Auto repair tools for ZE buses
- Auto repair machinery for ZE buses
- High voltage safety equipment/supplies for ZE buses
- EVSE/diagnostic equipment

Costs must be able to be incurred within agreement term.



# Proposed Stacking Eligibility



## Bus Awards

- AB 923 funds administered by local air districts may be stacked

### **Cannot** stack with:

- California Climate Investment (CCI) funds
- EPA Clean School Bus Program
- VW Environmental Mitigation Trust
- Carl Moyer
- Community Air Protection Incentives to Reduce Emissions in AB 617 Communities

## Infrastructure Awards

- Stacking is generally allowable if combined funding sources do not exceed total project cost
- Utility programs that reimburse utility service upgrades and integration costs may be utilized, but cannot be reimbursed by ZESBI
- Multiple sources of CEC funding, such as solicitation or EnergIIIZE funding, **cannot** be applied to one project



# Available Tax Credits



- [IRS Section 45W](#)
  - Eligible entities can claim up to \$40,000 tax credit
- [IRS Section 30C](#)
  - Eligible entities can claim up to \$100,000 tax credit for infrastructure
  - Qualifying infrastructure must be placed in low-income communities or non-urban census tracts
- State and local governments can request elective pay reimbursement
  - For more information, visit: <https://www.irs.gov/pub/irs-pdf/p5817e.pdf>



## Discussion 2:



- Is there any feedback on the proposed topics covered?
  - Eligible replacement school buses/infrastructure costs
  - Award amounts
  - Eligible school transportation funding



Use the raised hand function (#2 if calling in by phone)



Please state your name and affiliation before asking a question or making a comment

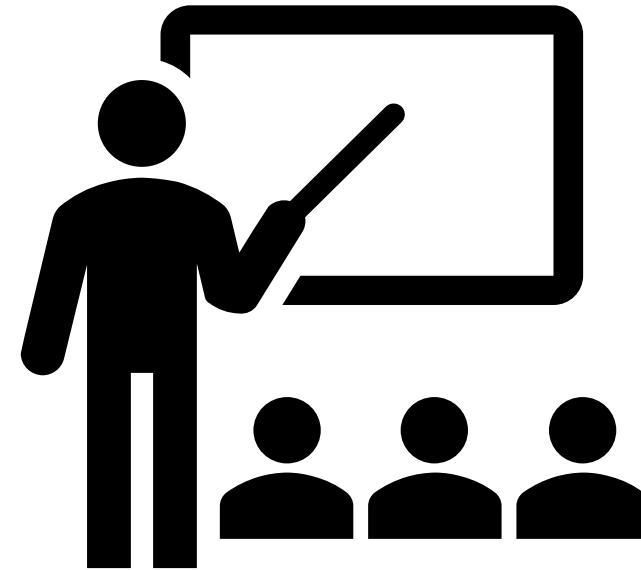


We will now take a brief break.

The stopwatch on screen shows the remaining amount of time before we continue with the Work Group.



# Technical Assistance and Workforce Development





# Feedback Received



Feedback	Response
<p>Fund project management and technical assistance, such as bus route analysis, right sized charging, and development of future proofed zero-emission school bus transition plans.</p>	<p>The ZESBI program will leverage existing technical assistance resources and give LEAs the option of funding additional technical assistance needs using the 10% school transportation funding.</p>





# Existing Technical Assistance



## EnergiZE's Infrastructure Readiness Center (IRC)

Free online tools and  
resources

- Charging best practices
- How to read your energy bill
- Infrastructure planning guide
- Low Carbon Fuel Standard Fleet estimator and guides
- Total cost of ownership calculator

[EnergiZE IRC](#)

## Joint Office of Energy and Transportation's Clean Bus Planning Awards

Free online tools and  
resources

- Financial analysis
- Infrastructure assessment and optimization strategy
- Procurement and project staging
- Recommendations for next steps
- Vehicle electrification feasibility analysis

[Joint Office site](#)

## World Resources Institute's (WRI) Electric School Bus Initiative

Free online tools and  
resources

- Infrastructure planning guide
- Request for Proposal template
- Request for Information template
- School bus electrification roadmap
- 30 minute 1:1 call

[WRI website](#)



# Proposed Technical Assistance



- Expand CalFleet Advisor and Infrastructure Readiness Center to include electric school bus specific technical assistance
- Provide a list of potential technical assistance vendors
  - Grantees are not required to use technical assistance vendors from the list



# Existing Workforce Training Program



## The Electric School Bus Training Program

- Free online courses with regional in-person trainings available
- Courses include:
  1. Introduction to EVs
  2. High Voltage Vehicle Safety
  3. Heavy Duty Electrical 1: Electrical Principles, Circuits & Testing
  4. Heavy Duty Electrical 2: Batteries, Electronic Control Systems & Sensor Technology
  5. Electric Vehicle Supply Equipment and Electric Vehicle Charging Systems
- Certification from Cerritos Community College upon completion
- For more information, use the link below:
  - <https://atleducation.org/cec/the-electric-school-bus-training-project/esb-online-training-now-available/>





# Proposed Supplements to Training Program



Additional workforce development costs that could be reimbursed using the 10% school transportation funding:



Maintenance equipment to supplement Electric School Bus Training Program



Mileage reimbursement for in-person Electric School Bus Training Program courses



Incentive stipends for technicians that complete the Electric School Bus Training Program



## Discussion 3:



- Is there any feedback on the proposed approach to technical assistance and workforce development?
- Are there any additional suggestions for ZESBI funded technical assistance or workforce development?



Use the raised hand function  
(#2 if calling in by phone)



Please state your name and affiliation before  
asking a question or making a comment



# Proposed Award Requirements





# Proposed Purchase Order Requirement



## School Bus:

- Grantees would be required to insert a liquidated damages clause to their purchase order (PO)
  - Dealer to reduce purchase price of school bus by \$100 for every week delivered late
    - School bus must be able to pass CHP-292 inspection
    - Rejection of certification counts towards liquidated damages



# Grantee Requirements



1. Scrappage of old school bus being replaced
  - Scrappage must occur no later than 24 months from date of delivery of the replacement vehicles
2. Proof of scrappage of the retired ICE school bus(es)
3. Submit school bus/infrastructure information and documentation





# Proposed Data Collection and Reporting



- Program reporting
  - Vehicle and infrastructure performance
  - ZESBI program experience and feedback
- Minimum 12-months of quarterly data collection and reporting
  - Vehicle miles traveled
  - Vehicle down time
  - Data related to charging/fueling events for each funded charger



# Proposed Funding Disbursement Requirements



## School Bus:

- Pass CHP inspection
- Documentation must be submitted, not limited to:
  - Final Invoice
  - DMV Registration



# Proposed Funding Disbursement Requirements



## Infrastructure:

- Milestone payments for eligible costs incurred throughout lifecycle of a project
- Applicants shall propose and use a milestone payments schedule
- A milestone payment shall not equal  $>50\%$  of **infrastructure** award



# Proposed Retention



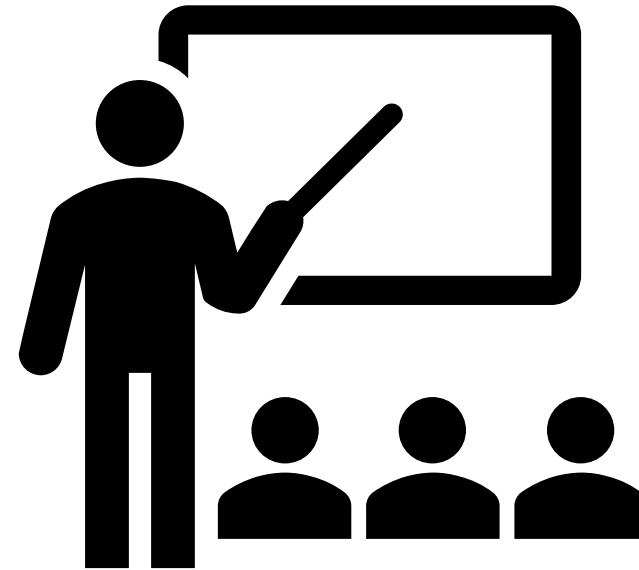
10% of the sum of the infrastructure award and the school transportation program funding will be held as retention until all grant requirements are satisfied at the end of the agreement term.

**Example: \$12,500 will be retained from a grant for 1 Type D school bus with wheelchair lift and 1 DCFC.**

\$360,000 base grant for school bus  
\$ 15,000 for wheelchair "plus-up"  
+ \$ 75,000 infrastructure award  
\$ 450,000 combined school bus and infrastructure award  
  
+ \$ 50,000 for school transportation program  
\$ 500,000 total ZESBI award



# Application Proposals





# Proposed Application Requirements



- Joint Application
  - Letter of Intent
  - DMV Registration
  - Current CHP-292 Certification
    - Buses with expired certifications will not be eligible
  - Proposed types of chargers
    - Applicants will not be held to their indicated interest
- Proof of compliance with Clean Truck Check



# Proposed Application Period



Application expected to launch in May 2024  
and close on September 30, 2024.

## Proposed Resources

- Application assistance
- LEA priority designation list



# Feedback Received



Feedback	Response
<p>Join and streamline bus and infrastructure application. Keep the application open for 3 to 4 months.</p>	<p>In adherence to SB 114, the ZESBI vehicle and infrastructure application will be a joint application with only the most necessary fields. The ZESBI application is proposed to be open for at least 90-days.</p>





# Discussion 4: Discussion Question



- Are there any questions regarding the proposed award requirements?
- Are there any questions regarding the application or proposed resources?

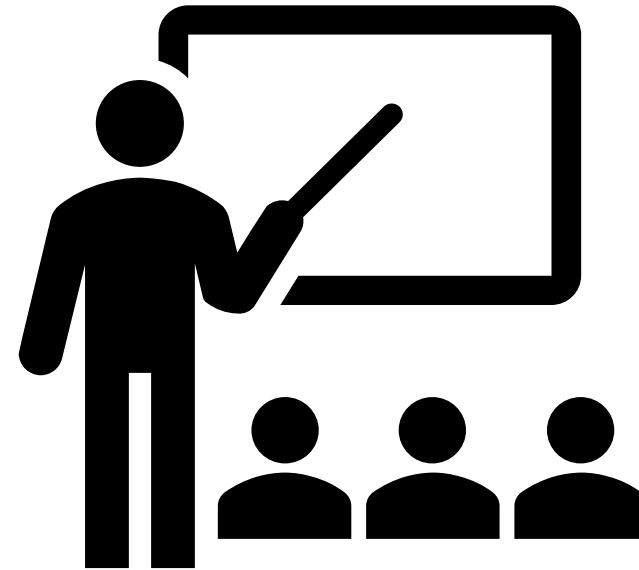


Use the raised hand function (#2 if calling in by phone)



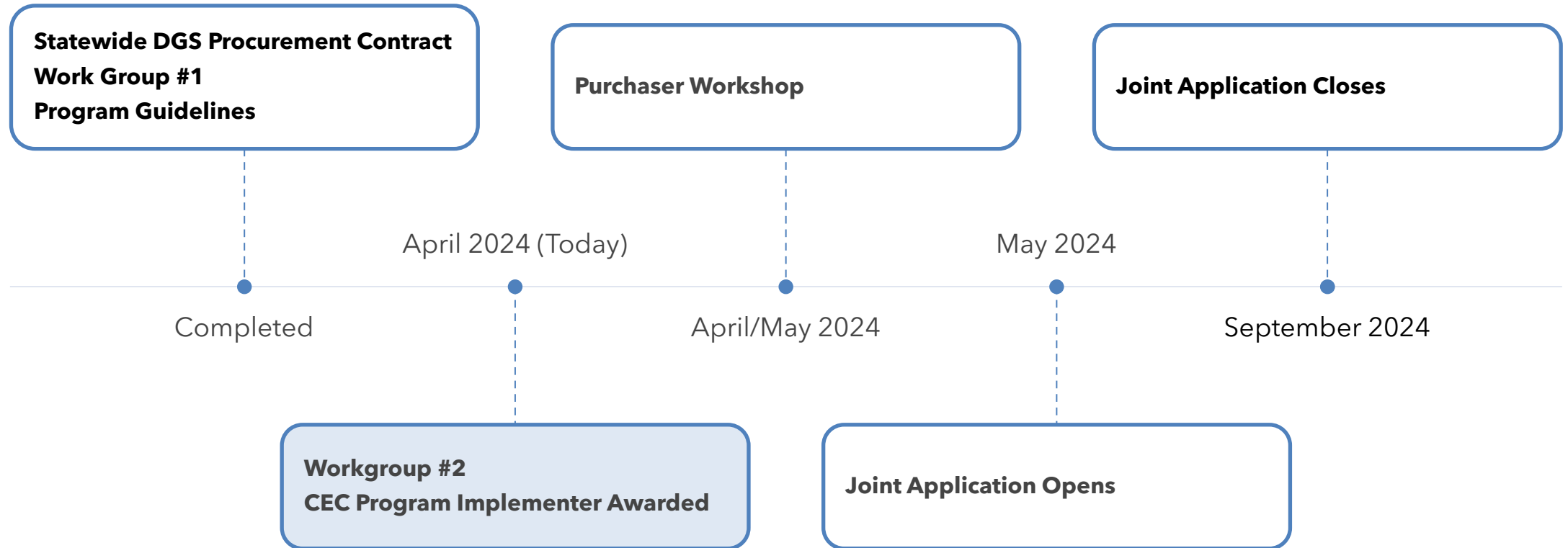
Please state your name and affiliation before asking a question or making a comment

# Next Steps





# Proposed Timeline Overview





# Stay Connected



- Subscribe to [CEC Listservs](#)
  - Clean Transportation Program
  - Zero Emission School Bus and Infrastructure Program
- Subscribe to [CARB Listserv](#)
  - School Bus Topic
- Docket number
  - [18-TRAN-01](#)



# Key Dates



Activity	Date
Today's Work Group Comments Due By	April 17, 2024 @ 5:00 PM PST
Joint Application Window Opens	May 2024
Joint Application Window Closes	September 30, 2024



# Contact Us



## **SCHOOL BUS**

Manuel Aguila - CARB Lead Staff  
[Manuel.Aguila@arb.ca.gov](mailto:Manuel.Aguila@arb.ca.gov)

Jessica Johnson - CARB Manager  
[Jessica.Johnson@arb.ca.gov](mailto:Jessica.Johnson@arb.ca.gov)

Subscribe to GovDelivery

<https://public.govdelivery.com/accounts/CARB/subscriber/new?preferences=true#tab1>

## **INFRASTRUCTURE**

Elizabeth Menchaca-Guhl - CEC Lead Staff  
[Elizabeth.Menchaca-Guhl@energy.ca.gov](mailto:Elizabeth.Menchaca-Guhl@energy.ca.gov)

Diana Friedrich - CEC Acting Supervisor  
[Diana.Friedrich@energy.ca.gov](mailto:Diana.Friedrich@energy.ca.gov)



# Submit Comments



## Comment by E-Mail

E-mail: [docket@energy.ca.gov](mailto:docket@energy.ca.gov)

Subject Line: "18-TRAN-01 SB 114 Funding Available for Zero Emission School Buses and Infrastructure"

## Electronic Commenting System

Visit the Comment Page for Docket #18-TRAN-01

at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=18-TRAN-01>

**Deadline to submit comments: April 17, 2024 5:00 PM**