



# South Coast Air Quality Management District



21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

## HYBRID TECHNOLOGY COMMITTEE MEETING

### Committee Members

Mayor Pro Tem Carlos Rodriguez, Committee Chair  
Supervisor Curt Hagman  
Mayor Patricia Lock Dawson  
Mayor Pro Tem Larry McCallon  
Board Member Veronica Padilla-Campos  
Supervisor Donald Wagner

**January 24, 2025 ♦ 12:00 p.m.**

### TELECONFERENCE LOCATIONS

Riverside City Hall 7 <sup>th</sup> Floor Conference Room 3900 Main Street Riverside, CA 92522	County Administration North 400 Civic Center Drive 6 <sup>th</sup> Floor, Room 601A Santa Ana, CA 92701
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**A meeting of the South Coast Air Quality Management District Technology Committee will be held at 12:00 p.m. on Friday, January 24, 2025 through a hybrid format of in-person attendance in the Dr. William A. Burke Auditorium at the South Coast AQMD Headquarters, 21865 Copley Drive, Diamond Bar, California, and remote attendance via videoconferencing and by telephone. Please follow the instructions below to join the meeting remotely.**

**Please refer to South Coast AQMD's website for information regarding the format of the meeting, updates if the meeting is changed to a full remote via webcast format, and details on how to participate:**

**<http://www.aqmd.gov/home/news-events/meeting-agendas-minutes>**

### **ELECTRONIC PARTICIPATION INFORMATION (Instructions provided at bottom of the agenda)**

*Join Zoom Meeting - from PC or Laptop*

**<https://scaqmd.zoom.us/j/96669409722>**

**Zoom Webinar ID: 966 6940 9722 (applies to all)**

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**Audience will be allowed to provide public comment in person or through Zoom connection or telephone.**

**PUBLIC COMMENT WILL STILL BE TAKEN**

*Cleaning the air we breathe...*

**AGENDA**

*Members of the public may address this body concerning any agenda item before or during consideration of that item (Gov't. Code Section 54954.3(a)). If you wish to speak, raise your hand on Zoom or press Star 9 if participating by telephone. All agendas for regular meetings are posted at South Coast AQMD Headquarters, 21865 Copley Drive, Diamond Bar, California, at least 72 hours in advance of the regular meeting. Speakers may be limited to three (3) minutes total for all items on the agenda.*

**CALL TO ORDER**

**ROLL CALL**

**ACTION ITEMS (1-3):**

- 1. Execute Contract to Develop and Demonstrate Zero-Emission Transport Refrigeration Unit with Electric-Powered Trailer for Heavy-Duty Vehicles (*Motion Requested*)** Sam Cao, Ph.D.  
Program Supervisor

Range Energy, Inc. and San Joaquin Valley Air Pollution Control District propose to partner with South Coast AQMD to demonstrate and validate an electric Transport Refrigeration Unit system coupled with Range Energy's electric-powered trailer technology in real world commercial fleet operations. This action is to execute a contract with Range Energy in an amount not to exceed \$111,180 from Clean Fuels Program Fund (31) for the development and demonstration of an electric TRU coupled with an electric-powered trailer in the South Coast Air Basin.
- 2. Amend Contracts for Joint Electric Truck Scaling Initiative Pilot Project; and Establish Special Revenue Fund and Recognize Revenue for Ports Charging Infrastructure Projects (*Motion Requested*)** Sam Cao, Ph.D.  
Program Supervisor

This item covers two separate programs including the Joint Electric Truck Scaling Initiative (JETSIS) Project and Memorandums of Understanding (MOUs) with the Ports of Los Angeles (POLA) and Long Beach (POLB). In June 2021, the Board approved the execution of contracts for the CARB and CEC funded JETSIS Project. Delays with the charging infrastructure at one location require that the project be extended another 21 months. CARB and CEC approved the project extension as well as reallocation of up to \$974,504 of unused administrative funds to be used as additional project funds. Amended CEC/CARB agreements are expected in the next few weeks. Separately, in September 2024, the Board approved a Mobile Source Air Pollution Reduction Review Committee (MSRC) item establishing MOUs between the South Coast AQMD, on behalf of the MSRC, and POLA and POLB, providing up to \$23,827,036 to implement heavy duty truck infrastructure projects. It is necessary to establish a Special Revenue Fund and recognize revenue for these projects. These actions are to: 1) amend and increase JETSIS contract awards by

reallocating unspent administrative funds to cover partial energy storage cost, deploy additional chargers, and other project management costs from the GHG Reduction Projects Special Revenue Fund (67); 2) establish the POLA/POLB EVSE Infrastructure Projects Special Revenue Fund (92); and 3) recognize revenue, upon receipt up to \$23,827,036 into Fund 92.

**3. Issue Program Announcement for Lower Emission School Bus Program (*Motion Requested*)**

Yuh Jiun Tan  
Program Supervisor

Since 2001, South Coast AQMD has funded the replacement of over 1,900 publicly owned diesel school buses and retrofitted nearly 3,400 diesel school buses as part of the Lower Emission School Bus Program using various sources of funds, including the U.S EPA Targeted Airshed Grant, Proposition 1B – Lower Emission School Bus Program and Carl Moyer Program AB 923 Special Revenue Funds. These actions are to: 1) allocate \$45 million from the Carl Moyer Program AB 923 Fund (80) for the Lower Emission School Bus Program; 2) issue a Program Announcement (PA) #PA2025-02 to solicit applications to replace older and higher-emitting school buses owned by public school districts under the Lower Emission School Bus Program; and 3) based on the results of the PA, authorize the Executive Officer to award and execute contracts with public school districts.

**INFORMATIONAL ITEM:**

**4. Schneider’s Commitment to a Sustainable Future**

An overview of Schneider’s sustainability goals and road to electrification highlighting the journey at the South El Monte Operations Center, a project funded under the Joint Electric Trucks Scaling Initiative (JETSI) Pilot project. Schneider will present their electrification experience that led to 6 million zero-emissions miles traveled to date that includes lessons learned. In addition, Schneider will share a summary of Schneider’s operation and electrification plans in California and beyond.

Jeremy Hock  
Engineering and  
Sustainability  
Manager  
Schneider National,  
Inc.

**5. Other Business**

Any member of the Committee, or its staff, on his or her own initiative or in response to questions posed by the public, may ask a question for clarification, may make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter, or may take action to direct staff to place a matter of business on a future agenda. (Gov’t. Code Section 54954.2)

**6. Public Comment Period**

At the end of the regular meeting agenda, an opportunity is provided for the public to speak on any subject within the Committee's authority that is not on the agenda. Speakers may be limited to three (3) minutes each.

**7. Next Meeting Date**  
**Friday, February 21, 2025 at 12:00 p.m.**

**ADJOURNMENT**

**Document Availability**

*All documents (i) constituting non-exempt public records, (ii) relating to an item on an agenda for a regular meeting, and (iii) having been distributed to at least a majority of the Committee after the agenda is posted, are available by contacting Penny Shaw Cedillo at 909.396.3179, or send the request to [pcedillo@aqmd.gov](mailto:pcedillo@aqmd.gov).*

**Americans with Disabilities Act and Language Accessibility**

*Disability and language-related accommodations can be requested to allow participation in the Technology Committee meeting. The agenda will be made available, upon request, in appropriate alternative formats to assist persons with a disability (Gov't Code Section 54954.2(a)). In addition, other documents may be requested in alternative formats and languages. Any disability or language-related accommodation must be requested as soon as practicable. Requests will be accommodated unless providing the accommodation would result in a fundamental alteration or undue burden to South Coast AQMD. Please contact Penny Shaw Cedillo at 909.396.3179 from 7:00 a.m. to 5:30 p.m., Tuesday through Friday, or send the request to [pcedillo@aqmd.gov](mailto:pcedillo@aqmd.gov).*

**INSTRUCTIONS FOR ELECTRONIC PARTICIPATION**

**Instructions for Participating in a Virtual Meeting as an Attendee**

As an attendee, you will have the opportunity to virtually raise your hand and provide public comment.

Before joining the call, please silence your other communication devices such as your cell or desk phone. This will prevent any feedback or interruptions during the meeting.

**Please note:** During the meeting, all participants will be placed on Mute by the host. You will not be able to mute or unmute your lines manually.

After each agenda item, the Chair will announce public comment.

Speakers may be limited to a total of 3 minutes for the entirety of the consent calendar plus board calendar, and three minutes or less for each of the other agenda items.

A countdown timer will be displayed on the screen for each public comment.

If interpretation is needed, more time will be allotted.

**Once you raise your hand to provide public comment, your name will be added to the speaker list. Your name will be called when it is your turn to comment. The host will then unmute your line.**

**Directions for Video ZOOM on a DESKTOP/LAPTOP:**

- If you would like to make a public comment, please click on the “**Raise Hand**” button on the bottom of the screen.
- This will signal to the host that you would like to provide a public comment and you will be added to the list.

**Directions for Video Zoom on a SMARTPHONE:**

- If you would like to make a public comment, please click on the **“Raise Hand”** button on the bottom of your screen.
- This will signal to the host that you would like to provide a public comment and you will be added to the list.

**Directions for TELEPHONE line only:**

- If you would like to make public comment, please **dial \*9** on your keypad to signal that you would like to comment.

BOARD MEETING DATE: February 7, 2025

AGENDA NO.

**PROPOSAL:** Execute Contract to Develop and Demonstrate Zero-Emission Transport Refrigeration Unit with Electric-Powered Trailer for Heavy-Duty Vehicles

**SYNOPSIS:** Range Energy, Inc. and San Joaquin Valley Air Pollution Control District propose to partner with South Coast AQMD to demonstrate and validate an electric Transport Refrigeration Unit system coupled with Range Energy's electric-powered trailer technology in real world commercial fleet operations. This action is to execute a contract with Range Energy in an amount not to exceed \$111,180 from Clean Fuels Program Fund (31) for the development and demonstration of an electric TRU coupled with an electrified-powered trailer in the South Coast Air Basin.

**COMMITTEE:** Technology, January 24, 2025; Recommended for Approval

**RECOMMENDED ACTION:**

Authorize the Executive Officer to execute a contract with Range Energy, for the development and demonstration of an electric Transport Refrigeration Unit coupled with an electric-powered trailer for heavy-duty vehicles in an amount not to exceed \$111,180 from Clean Fuels Program Fund (31).

Wayne Natri  
Executive Officer

AK:MW:VP:SC

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**Background**

Transport Refrigeration Units (TRUs) are used to maintain the appropriate temperature of goods during freight transportation activities, such as food transportation from cold storage warehouses to grocery stores. TRUs, most often powered by small diesel engines, are typically mounted to an insulated trailer to keep food items cold or frozen. TRUs are a significant contributor to community air pollution and local health impacts,

especially in areas with major transportation corridors like the San Joaquin Valley and the South Coast Air Basin.

CARB is developing requirements to transition diesel-powered TRUs to zero-emission (ZE) technologies. However, no commercially available ZE trailer mounted TRUs currently exist. CARB's 2022 TRU Technology Assessment report described several potential technologies that may help reduce emissions from trailer-mounted TRUs such as battery-electric TRU models associated with electric-powered trailers. The report discussed that electric-powered trailer technology including regenerative braking and axle generation may ease some of the power requirement challenges associated with ZE battery-electric TRUs.

In October 2023, the Board approved a project to develop a regenerative battery assisted electric-powered trailer with Range Energy, Inc., (Range Energy). Range Energy has successfully shown their trailer technology works and now is proposing to develop a trailer coupled with a battery-electric TRU.

### **Proposal**

Range Energy, San Joaquin Valley Air Pollution Control District (SJVAPCD), Thermo King, LLC., and Nuvve Holding Co. will develop and conduct end-to-end demonstrations of a battery-powered TRU with electric-powered trailer technology. During the demonstration, a commercial fleet truck will tow a trailer equipped with a Thermo King, LLC electrical TRU and an on-board energy storage system in typical operating routes. Nuvve Holding Co. will install charging infrastructure at the fleet sites. The power capacity of the TRUs and electric-power trailer system will be analyzed. The charging infrastructure will be utilized to charge the trailer and trailer-installed equipment.

The project will be demonstrated with two fleets, one located in the South Coast Air Basin and the other in the San Joaquin Valley, covering grocery distribution and quick service restaurant operations. Overall, the project will hopefully develop and validate the use of ZE TRUs using regenerative trailer braking along with onsite charging.

### **Sole Source Justification**

Section VIII.B.2 of the Procurement Policy and Procedure identifies four major provisions under which sole source award may be justified. The request for sole source awards for the Range Energy contract is made under provision B.2.d.(1) Projects involving cost sharing by multiple sponsors. The proposed project includes match share by SJVAPCD, Range Energy, Thermo King and Nuvve Holding Co.

### **Benefits to South Coast AQMD**

Supporting the expanded application of electrification technology in the commercial sector is consistent with the Technology Advancement Office Clean Fuels Program

2024 Plan Update under the categories of “Electric/Hybrid Technologies” and “Zero Emission Infrastructure” and the South Coast AQMD 2022 AQMP. Successful demonstration of this technology will help support the commercial development and wide-scale deployment of ZE TRU technology in the heavy-duty truck sector and support CARB’s ZE TRU rulemaking.

**Resource Impacts**

The total estimated cost for the proposed project is up to \$741,200. South Coast AQMD proposes to contribute \$111,180 towards this project from the Clean Fuels Program Fund (31). The total project cost does not include the in-kind contribution of up to \$965,000 from Range Energy for parts and labor to build the TRU electric trailer for this demonstration.

<b>Funding Source</b>	<b>Funding Amount</b>	<b>Percent</b>
Range Energy, Inc.	\$334,840	45
Thermo King, LLC	\$62,000	8
Nuvve Holding Co.	\$122,000	17
SJVAPCD	\$111,180	15
South Coast AQMD (requested)	\$111,180	15
<b>Total</b>	<b>\$741,200</b>	<b>100</b>

Sufficient funds are available in the Clean Fuels Program Fund (31) for the proposed project.

The Clean Fuels Program Fund (31) is established as a special revenue fund resulting from the state mandated Clean Fuels Program. The Clean Fuels Program, under Health and Safety Code Sections 40448.5 and 40512 and Vehicle Code Section 9250.11, establishes mechanisms to collect revenues from mobile sources to support projects to increase the utilization of clean fuels, including the development of the necessary advanced enabling technologies. Funds collected from motor vehicles are restricted, by statute, to be used for projects and program activities related to mobile sources that support the objectives of the Clean Fuels Program.



# Agenda Item #1

Execute Contract to Develop and  
Demonstrate Zero-Emission  
Transport Refrigeration Unit with  
Electric-Powered Trailer for  
Heavy-Duty Vehicles

Sam Cao

# Background

- Transport Refrigeration Units (TRUs) used to maintain temperature of goods during transport
- CARB developing ZE trailer mounted TRU regulation, but key barriers include:
  - Infrastructure requirements
  - Costs
  - Operational constraints
- Need ZE TRU demo & commercialization
- Range Energy developed a regenerative electrified trailer that can be integrated with battery electric TRUs



Transport Refrigeration Unit (TRU)



Regenerative Electrified Trailer

# Proposal

- Demonstration and validation of eTRU integrated with Range Energy's regenerative electrified trailer:
  - Thermo King to provide the eTRU
  - Nuvve Holding to provide the charger
  - Range Energy to integrate eTRU with the refrigerated trailer
  - Demonstration with grocery operation in San Joaquin Valley and restaurant distribution in South Coast Air Basin



# Proposed Project Cost

Proposed Partners	Project Cost-Share	Percent
Range Energy	\$334,840	45%
Thermo King	\$62,000	8%
Nuvve Holding	\$122,000	17%
San Joaquin Valley APCD	\$111,180	15%
South Coast AQMD (requested)	\$111,180	15%
<b>Total Project Cost</b>	<b>\$741,200</b>	<b>100%</b>

# Summary of Recommended Action

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Authorize the Executive Officer to execute a contract with Range Energy for the development and demonstration of an electric TRU coupled with an electric-powered trailer from Clean Fuels Program Fund (31)

BOARD MEETING DATE: February 7, 2025

AGENDA NO.

**PROPOSAL:** Amend Contracts for Joint Electric Truck Scaling Initiative Pilot Project; and Establish Special Revenue Fund and Recognize Revenue for Ports Charging Infrastructure Projects

**SYNOPSIS:** This item covers two separate programs including the Joint Electric Truck Scaling Initiative (JETSI) Project and Memorandums of Understanding (MOUs) with the Ports of Los Angeles (POLA) and Long Beach (POLB). In June 2021, the Board approved the execution of contracts for the CARB and CEC funded JETSI Project. Delays with the charging infrastructure at one location require that the project be extended another 21 months. CARB and CEC approved the project extension as well as reallocation of up to \$974,504 of unused administrative funds to be used as additional project funds. Amended CEC/CARB agreements are expected in the next few weeks. Separately, in September 2024, the Board approved a Mobile Source Air Pollution Reduction Review Committee (MSRC) item establishing MOUs between the South Coast AQMD, on behalf of the MSRC, and POLA and POLB, providing up to \$23,827,036 to implement heavy duty truck infrastructure projects. It is necessary to establish a Special Revenue Fund and recognize revenue for these projects. These actions are to: 1) amend and increase JETSI contract awards by reallocating unspent administrative funds to cover partial energy storage cost, deploy additional chargers, and other project management costs from the GHG Reduction Projects Special Revenue Fund (67); 2) establish the POLA/POLB EVSE Infrastructure Projects Special Revenue Fund (92); and 3) recognize revenue, upon receipt up to \$23,827,036 into Fund 92.

**COMMITTEE:** Technology, January 24, 2025; Recommended for Approval

**RECOMMENDED ACTIONS:**

1. Authorize the Executive Officer to amend five contracts with NFI Interactive Logistics, Inc., Daimler Trucks North America, LLC, CALSTART, Inc., Electric Power Research Institute, and TRC Companies, Inc. (formerly Gladstein, Neandross

and Associates) to add \$455,247, \$300,000, \$48,785, \$39,000, and \$131,472, respectively for a total of up to \$974,504, to install energy storage and chargers, conduct studies, perform data analysis, develop a workforce plan, and conduct project reporting, by reallocating unused administrative funds from CEC/CARB grants to cover additional project costs for the JETSI project implementation from the GHG Reduction Projects Special Revenue Fund (67), pending receipt of amended grant agreements from CEC and CARB;

2. Establish the POLA/POLB EVSE Infrastructure Projects Special Revenue Fund (92), and
3. Recognize revenue, upon receipt, up to \$11,306,375 from the Port of Los Angeles and \$12,520,661 from the Port of Long Beach into Fund (92) for MSRC's administration of heavy-duty zero emission drayage truck charging infrastructure projects under MOUs with the Ports of Los Angeles and Long Beach.

Wayne Nastri  
Executive Officer

AK:MW:VP:CR:SC

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## **Background**

This Board letter encompasses two separate programs including the Joint Electric Truck Scaling Initiative (JETSI) Pilot Project and the Mobile Source Air Pollution Reduction Review Committee's (MSRC) administration of heavy-duty truck infrastructure projects pursuant to Memorandums of Understanding (MOUs) between the South Coast AQMD, on behalf of the MSRC, and the Ports of Los Angeles (POLA) and Long Beach (POLB). Although these programs are separate, the overall approach is to support the deployment of zero emission goods movement and to execute, amend and implement awards and agreements previously approved by the Board.

### JETSI Pilot Project

In June 2021, the Board approved the execution of contracts for the CARB and CEC funded JETSI Pilot Project to deploy 100 Daimler and Volvo Class 8 battery electric trucks, charging infrastructure, and distributed energy resources technologies at two fleets in overburdened communities. South Coast AQMD was awarded \$16.1 million in CARB funds and \$10.9 million in CEC Funds for the JETSI Pilot Project. Under this project, the South Coast AQMD is leading a collaborative effort with the Mobile Source Air Pollution Reduction Review Committee (MSRC), Southern California Edison, POLA, and POLB. These partners provided a total cost share of \$21.4 million in addition to \$25.4 million in cost share from the two participating fleets. By the end of 2024, all 100 Class 8 battery electric trucks had been deployed and had accumulated more than 4.7 million zero-emission miles. This project has demonstrated the viability

of using zero-emission goods movement trucks through at-scale deployments at two fleet locations. Although most of the project has been completed, the final deployment of charging infrastructure is among the final tasks to be implemented.

#### Ports MOUs Implementation

The MSRC released a Request for Information (RFI) on September 2, 2022, to seek partnerships and facilitate the investment in zero-emission infrastructure for goods movement trucks in the South Coast AQMD region. Both POLB and POLA responded to the RFI, expressing an interest in partnership opportunities to implement electric vehicle support infrastructure projects for zero-emission heavy-duty drayage trucks operating at the ports. MOUs were subsequently executed between both ports and the South Coast AQMD on behalf of the MSRC for the work and to receive funds from both ports for the projects, with MSRC taking the lead in project administration. Completing the project requires creating a special fund to recognize revenue from the ports.

#### **Proposal – JETSI Project**

As the JETSI project nears completion, the NFI fleet location has experienced significant charging infrastructure installation delays due to utility requirements that resulted in increased project scope and cost. As a result, the JETSI project will be extended from March 2025 to December 2026 to accommodate the infrastructure delays at NFI. Therefore, South Coast AQMD staff recommends reallocating up to \$974,504 of its previously recognized and unspent administrative funds from CARB and CEC to cover additional project costs which include the project management costs for the extended period, deployment of additional chargers, and additional cost-share for the NFI infrastructure installation. These actions are to amend a contract with NFI Interactive Logistics, Inc. to add up to \$455,247 consisting of \$300,000 to support charging infrastructure deployment, and \$155,247 for communication and outreach activities; amend a contract with Daimler Trucks North America, LLC to add up to \$300,000 to deploy additional chargers with Schneider National Inc.; amend a contract with CALSTART, Inc. to add up to \$48,785 for charger pricing analysis and fleet case studies; amend a contract with Electric Power Research Institute to add up to \$48,785 for enhancing fleet and charger data analysis; and amend a contract with TRC Companies, Inc. (formerly Gladstein, Neandross and Associates) to add up to \$131,472 for JETSI Pilot Project reporting and ZEV workforce plan development. CARB and CEC provided preliminary approval of these reallocations, pending receipt of amended grant amendments. There have been no net changes in grant awards.

#### **Proposal – Ports MOUs Implementation**

Additionally, in order for the MSRC to implement the MOUs with POLA and POLB for charging infrastructure projects, this action is to establish the POLA/POLB EVSE Infrastructure Projects Special Revenue Fund (92) and recognize revenue, upon receipt,



up to \$11,306,375 from the Port of Los Angeles and \$12,520,661 from the Port of Long Beach into Fund (92).

**Benefits to South Coast AQMD**

The JETSI Pilot and its partnership with the ports to deploy infrastructure support the development, demonstration, and deployment of zero-emission freight transport technologies. The JETSI Pilot Project also includes the installation of solar-powered infrastructure coupled with energy storage to enable the microgrids for fleets charging heavy-duty trucks, yard tractors, and forklifts. These technologies are included in the *Technology Advancement Office Clean Fuels Program 2024 Plan*. These projects are to develop and demonstrate zero-emission heavy-duty trucks, freight handling equipment, and infrastructure coupled with solar and battery storage. These projects help contribute to the attainment of national ambient air quality standards in the Basin by eliminating PM and NOx emissions from diesel heavy-duty trucks and off-road freight handling equipment.

With respect to the MSRC’s MOUs with the ports, the establishment of the Special Revenue Fund (92), and subsequent receipt and recognition of revenue into the Fund, will allow the funding of agreements for projects to install over 150 total truck chargers across eight locations, greatly enhancing the charging network.

**Resource Impacts**

The JETSI contract amendments will be fully covered by the existing administrative funds from CARB and CEC for the JETSI Pilot Project in the GHG Reduction Projects Special Revenue Fund (67); there are no net changes in the total grant award.

To fulfill the goals of the MOUs, the POLA/POLB EVSE Infrastructure Projects Special Revenue Fund would be created. Funds from POLA and POLB will be deposited into the POLA/POLB EVSE Infrastructure Projects Special Revenue Fund (92). Costs of the projects specified in the MOUs will be covered by these funds.

## Agenda Item #2

Amend Contracts for Joint Electric Truck  
Scaling Initiative Pilot Project; and  
Establish Special Revenue Fund and  
Recognize Revenue for Ports Charging  
Infrastructure Projects

Sam Cao

# Joint Electric Truck Scaling Initiative (JETSI) Background

- In June 2021, the Board approved \$74M award for the JETSI Pilot Project
- Regional collaborative to demonstrate Class 8 battery-electric trucks at scale
  - Deployment of 100 Class 8 BETs with supporting infrastructure at two fleets in overburdened communities
- Over 4.7 million zero-emission miles traveled to date



JETSI deployment at NFI and Schneider depots

# JETSI Proposal

- Significant delays in infrastructure installation at NFI site due to utility requirements and cost increases
- Reallocate \$974,504 of unspent administrative funds to cover partial cost of energy storage, deploy additional chargers, and extended implementation
- CARB/CEC\* have approved extension and reallocations, no change in total grant funds



Infrastructure equipment to be installed at NFI fleet depot

\*pending receipt of amended grant agreements from CEC and CARB

# Ports Infrastructure Charging Projects Background

- In September 2022, the MSRC released an RFI for goods movement zero-emission infrastructure
- In September 2024, the Board approved MOUs with the Ports of Long Beach and Los Angeles for Port funding of specified RFI response projects
  - Projects will install over 150 total truck charging plugs across eight locations
  - Projects to be administered by MSRC
- MOUs have been executed; MSRC and Board consideration of individual project awards during Q1 2025

# Summary of Recommended Actions, JETSI

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Authorize the Executive Officer to amend five contracts with for a total of up to \$974,504, to install energy storage and chargers, conduct studies, perform data analysis, develop a workforce plan, and conduct project reporting from the GHG Reduction Projects Special Revenue Fund (67)



# Summary of Recommended Actions, Port MOUs

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- Establish the POLA/POLB EVSE Infrastructure Projects Special Revenue Fund (92)
- Recognize revenue, upon receipt, up to \$11,306,375 from the Port of Los Angeles and \$12,520,661 from the Port of Long Beach into Fund (92)

BOARD MEETING DATE: February 7, 2025

AGENDA NO.

**PROPOSAL:** Issue Program Announcement for Lower Emission School Bus Program

**SYNOPSIS:** Since 2001, South Coast AQMD has funded the replacement of over 1,900 publicly owned diesel school buses and retrofitted nearly 3,400 diesel school buses as part of the Lower Emission School Bus Program using various sources of funds, including the U.S EPA Targeted Airshed Grant, Proposition 1B – Lower Emission School Bus Program and Carl Moyer Program AB 923 Special Revenue Funds. These actions are to: 1) allocate \$45 million from the Carl Moyer Program AB 923 Fund (80) for the Lower Emission School Bus Program; 2) issue a Program Announcement (PA) #PA2025-02 to solicit applications to replace older and higher-emitting school buses owned by public school districts under the Lower Emission School Bus Program; and 3) based on the results of the PA, authorize the Executive Officer to award and execute contracts with public school districts.

**COMMITTEE:** Technology, January 24, 2025; Recommended for Approval

**RECOMMENDED ACTIONS:**

1. Allocate \$45 million from the Carl Moyer Program AB 923 Fund (80) for the Lower Emission School Bus Program to replace combustion school buses;
2. Issue Program Announcement (PA) #PA2025-02 for replacement of pre-2005 school buses with combustion engines owned by public school districts with new zero-emission buses under the Lower Emission School Bus Program; and
3. Based on the results of the PA, authorize the Executive Officer to award and execute contracts with public school districts for a total amount not to exceed \$45 million from the Carl Moyer AB 923 Special Revenue Fund (80).

**Wayne Nastri**  
Executive Officer



## Background

Since the commencement of the Lower Emission School Bus Program in 2001, South Coast AQMD has awarded nearly \$372 million in local, state, and federal funds to replace over 1,900 highly polluting publicly owned diesel school buses with alternative fuel or zero-emission buses and to retrofit 3,400 diesel school buses with particulate traps. This program has enabled thousands of students to commute in the cleanest school buses in the country. South Coast AQMD has used a variety of funding sources for the Lower Emission School Bus Program, including but not limited to, the U.S. EPA Targeted Airshed Grant Program, Proposition 1B – Lower Emission School Bus Program and Carl Moyer Program AB 923 Special Revenue Fund. During the last funding cycle of South Coast AQMD’s Lower Emission School Bus Program, many school districts were able to leverage the South Coast AQMD grant with funds from CARB’s Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP).

South Coast AQMD is soliciting zero-emission school bus project applications through PA2025-02. The maximum eligible funding amount for each type of school bus is summarized below:

<b>Maximum Program Funding Amounts<sup>1,2</sup></b>			
<b>School Bus Type</b>	<b>Fuel Type</b>	<b>South Coast AQMD Maximum Award</b>	<b>Infrastructure per School Bus</b>
Type A <sup>3</sup>	Zero-Emission	\$325,000	\$20,000
Type C or D <sup>4</sup>	Zero-Emission	\$370,000	\$20,000

<sup>1</sup> Projects that receive other funding sources (such as HVIP) may still be eligible. All funding sources must be disclosed on the application and South Coast AQMD will review them and determine if the funding can be combined.

<sup>2</sup> The funding amounts may be reduced if the project also receives other incentive funding.

<sup>3</sup> Type A school bus is a conversion or body constructed upon a van-type or cutaway front-section vehicle capable of transporting 10 to 24 passengers.

<sup>4</sup> Type C school bus is a heavy-duty vehicle with a front-mounted engine and is capable of transporting 42 to 72 passengers. A Type D school bus is a heavy-duty vehicle that is capable of transporting 66 or more passengers.

## Proposal

This action is to issue PA2025-02 for replacing pre-2005 model year school buses with combustion engines owned by public school districts and joint power authorities with new zero-emission buses. Funding for supporting charging infrastructure is also available upon request. The PA will close on April 8, 2025, after a two-month application period. Funding will be provided from the Carl Moyer Program AB 923 Fund (80).

## Outreach

In accordance with South Coast AQMD’s Procurement Policy and Procedure, a public notice advertising the PA and inviting bids will be published in the Los Angeles Times,

the Orange County Register, the San Bernardino Sun, and Riverside County's Press Enterprise newspapers to leverage the most cost-effective method of outreach to the South Coast Basin.

Additionally, potential bidders may be notified utilizing South Coast AQMD's own electronic listing of certified minority vendors. Notice of the PA will be emailed to the Black and Latino Legislative Caucuses and various minority chambers of commerce and business associations, and placed on South Coast AQMD's website (<http://www.aqmd.gov>) where it can be viewed by making a menu selection "Grants & Bids."

### **Bid Evaluation**

Proposals will be reviewed and evaluated in accordance with the Lower-Emission School Bus Program Guidelines, including all advisories and mail-outs, and the criteria in the attached PA.

### **Benefits to South Coast AQMD**

The successful implementation of the Lower Emission School Bus Program will ensure less polluting and safer school transportation for school children and will reduce public exposure to toxic diesel particulate matter emissions. This program will reduce NOx emissions and diesel particulate, which is a carcinogen.

### **Resource Impacts**

Funding for the Lower Emission School Bus Program will be provided by the Carl Moyer Program AB 923 Fund (80). Sufficient funding of \$45M is available in the Carl Moyer AB 923 Fund (80) for this program.

### **Attachment**

PA2025-02 - Lower Emission School Bus Program



## **Lower Emission School Bus Program (LESBP)**

### **SOUTH COAST AQMD PROGRAM ANNOUNCEMENT PA2025-02**

The South Coast Air Quality Management District (South Coast AQMD) is pleased to announce this funding opportunity for public school districts to replace older combustion school buses with zero-emission bus technologies. The Lower Emission School Bus Program (LESBP) is designed to reduce air pollution and children’s exposure to harmful emissions from combustion engine school buses. This Program Announcement applies to all public school districts, including those participating under a Joint Powers Authority agreement (JPA) in the South Coast Air Basin.

#### **SECTION I – OVERVIEW**

The South Coast AQMD is soliciting zero-emission school bus project applications for the 2025 Lower Emission School Bus Program (LESBP).

**WHO:** Public school districts and Joint Power Authorities (JPAs) formed by public school districts within the geographical boundaries of the South Coast AQMD are eligible to apply.

**WHAT:** Replacement of older combustion engine school buses to zero-emission buses. The new school bus must be CARB-certified to zero-emission. Funding for infrastructure to support the new school bus is also available upon request.

**HOW:** All applications must be submitted according to specifications in the Application Portal. Failure to adhere to these specifications may be cause for rejection of the application without evaluation. The Application Portal can be found on South Coast AQMD's program page on February 7, 2025: [www.aqmd.gov/schoolbus](http://www.aqmd.gov/schoolbus). Please note: Hardcopy, Facsimile or Email submittals will not be accepted.

**WHEN:** Solicitation opens on February 7, 2025 and **closes on April 18, 2025 at 3:00 p.m.**

#### **SECTION II - GENERAL PROGRAM INFORMATION**

Since 2001, South Coast AQMD has replaced over 1,900 high polluting school buses with new alternative fuel or zero-emission buses and retrofitted nearly 3,400 diesel buses with particulate traps. Over 50 percent of these funds have focused on reducing air pollution in underserved communities in the South Coast Air Basin. This program has enabled thousands of school children to commute in some of the cleanest school buses in the South Coast AQMD jurisdictional area.

Applicants should be advised that this is a competitive process and there may be a possibility that due to program priorities, cost effectiveness or funding limitations (i.e., caps), applicants may be offered only partial funding, and not all applications meeting the eligibility criteria may be funded.

Funding awards will be made based on several factors, including an equitable distribution of the program funds based on county population, benefits to underserved communities, model year and cumulative mileage of the old school bus, and project cost effectiveness. A school bus project will be considered as benefitting an underserved community if it meets any one of the following: 1) it is domiciled within an underserved community, 2) it will operate a majority of the time in an underserved community, or 3) makes at least one stop in an underserved community census tract.

**SECTION III - PROJECT CRITERIA**

Applicant Eligibility

Public school districts and Joint Power Authorities (JPAs) formed by several public school districts within the geographical boundaries of the South Coast AQMD are eligible to apply.

Project Eligibility

***Existing School Bus Requirements:***

South Coast AQMD is seeking applications from public school districts to replace older school buses with combustion engines (Type A, C, or D) that are at least 20 years old (including MY2005 or older), and with a Gross Vehicle Weight Rating (GVWR) of over 14,000 lbs. At a minimum, applicants will need to provide information identifying each of the school buses proposed for replacement, as well as documentation demonstrating current DMV registration, title, continuous CHP certification for the past three years, and photos of the school bus VIN, GVWR, and engine tag. The school buses proposed for replacement must be dismantled as required by the LESBP Guidelines.

Table 1, below, provides a summary of the key eligibility requirements for the existing school buses proposed for replacement.

<b>Table 1: Existing School Bus Requirements</b>
1) Existing school bus must be diesel, CNG, or propane fueled.
2) Must be a Type A, C, or D school bus.
3) Model Year of school bus must be 2005 or older.
4) The existing school bus must have GVWR greater than 14,000 lbs.
5) The existing school bus must be currently registered with the DMV.
6) Existing school bus must have a current, valid CHP certificate at the time of application
7) Must have maintained continuous CHP Certificates for at least the past 3 years.*
8) Must be willing to crush/dismantle existing school bus once replaced.

*\* If a lapse in the CHP safety certification exists, the school district must submit additional information/documentation as determined by South Coast AQMD staff to demonstrate regular use of the school bus.*

All existing combustion school buses proposed for replacement must be in current use. The application calls for specific information related to the existing school bus to be replaced. Additional information may be required as evidence that the existing school bus is in operation. If there is a break in documentation, please inform South Coast AQMD staff.

The applicant is required to attach on the application a copy of the TRUCRS Fleet List located on the Vehicle Info tab showing the compliance option each vehicle in the fleet is using and a copy of the TRUCRS General Fleet and Compliance Information Summary showing compliance located on the Compliance Status tab (“Meets Small Fleet Option” will specify “yes” if the fleet is using the Small Fleet option). The TRUCRS website can be accessed at: [https://ssl.arb.ca.gov/ssltrucrsto/trucrs\\_reporting/login.php](https://ssl.arb.ca.gov/ssltrucrsto/trucrs_reporting/login.php).

***Replacement School Bus Requirements:***

For replacement of 2005 or older combustion school buses, applicants may only purchase zero-emission school buses. Applicants may choose to purchase a zero-emission school bus that is certified or approved by CARB, including zero-emission school buses that are eligible through the state’s Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP). Executive Orders from CARB may be downloaded at: <http://www.arb.ca.gov/msprog/onroad/cert/cert.php>

Table 2, below, provides an itemized summary of the key eligibility requirements for the replacement school buses.

<b>Table 2: Replacement School Bus Requirements</b>
1) New school bus must be zero-emission.
2) Must be a Type A, C, or D school bus.
3) Replacement school bus must be in the same weight class as the existing school bus, unless otherwise approved by South Coast AQMD
3) Replacement school bus must be model year 2025 or newer
4) Replacement school bus must have GVWR greater than 14,000 lbs.
5) Maintain CHP Certificates during the term of contract
6) Replacement school bus must be CARB certified zero-emission school bus technology, including HVIP-listed zero-emission school bus technologies.

Applicant will need to provide a price quote and CARB Executive Order for the proposed new school bus and specify which bid will be used to order the new school bus. Executive Orders from CARB may be downloaded at: <http://www.arb.ca.gov/msprog/onroad/cert/cert.php>. Public school districts may rely on any legally valid piggy-back bid in the State of California to purchase the new replacement school buses. Examples include, but are not restricted to, the Waterford and Hemet bids. Funding requested for purchase of a bus shall be consistent with the prices on the legally valid piggy-back bid.

School Districts will need to own and operate the new school bus for a minimum of five years from the date of initial CHP certification.

***Infrastructure Requirements:***

School Districts can request up to \$20,000 per school bus for the purchase and installation of infrastructure to support the new zero-emission school bus. If funds for infrastructure are needed, the applicant must make such a request on the application and provide justification for the funds requested, including disclosure of all funding sources that will be used for the purchase/installation of the infrastructure. Requested funds may be used to offset the cost of procuring/installing new infrastructure equipment or expanding the capacity of an existing station. Funding for the expansion of an existing station must be related to the capacity needed by the zero-emission buses awarded through this program.

#### **SECTION IV - PROGRAM FUNDING**

The maximum eligible funding amount for each type of school bus is summarized in Table 3. The maximum funding amounts include sales tax and the cost of fire suppression and gas detection systems; however, school districts will have to pay for any additional discretionary options that they may choose to include on the school bus. Funding for charging infrastructure to support the new school buses is also available to school districts.

Applicants must disclose all sources of co-funding, including the name of the funding source and amount of funding at the time of application and prior to invoice payment. If a school district is approved to receive funding through another program, the maximum funding amount may be reduced. The sum of all grants and other funds applied toward the project shall not exceed the total cost of the school bus.

<b>Table 3: Maximum Program Funding Amounts<sup>1</sup></b>			
<b>School Bus Type</b>	<b>Fuel Type</b>	<b>South Coast AQMD Maximum Award</b>	<b>Infrastructure per School Bus</b>
Type A	Zero-Emission	\$325,000 <sup>1</sup>	\$20,000
Type C or D	Zero-Emission	\$370,000 <sup>1</sup>	\$20,000

<sup>1</sup> The funding amounts shown in this table may be reduced if the project also receives other incentive funding.

Any school district match funding required by the Lower Emission School Bus Program Guidelines will be provided by the South Coast AQMD on behalf of the school districts up to the maximum funding amount shown in Table 3.

#### **SECTION V – DELIVERABLES**

The contract will describe how the project will be monitored and what type of information must be submitted as part of the reporting requirements. At a minimum, the South Coast AQMD expects to receive an annual report for each year during the full contract term, or project life, which provides the annual miles, and operational and maintenance issues encountered and how they were resolved. South Coast AQMD reserves the right to verify the information provided.

## **SECTION VI: APPLICATION SUBMITTAL REQUIREMENTS**

All online applications must be submitted according to specifications set forth herein. Failure to adhere to these specifications may be cause for rejection of the application without evaluation.

**ALL APPLICATIONS MUST BE RECEIVED VIA SOUTH COAST AQMD'S  
ONLINE GRANT MANAGEMENT SYSTEM (GMS)  
NO LATER THAN FRIDAY, APRIL 18, 2025 at 3:00 PM**

**TO APPLY, PLEASE VISIT  
[www.aqmd.gov/schoolbus](http://www.aqmd.gov/schoolbus)**

All applications must be **signed by the school's superintendent**. Applications without authorizing signatures will not be accepted.

A resolution from the school district governing board authorizing the submittal of the application and identifying the individual authorized to implement the school bus replacement project **must** be submitted in the online application.

### **Grounds for Rejection:**

An application may be immediately rejected if the application:

- Does not include correct documentation and other forms required.
- Is not signed by an individual authorized to represent the school district.

### **Electronic Submittal:**

The proposer must submit the application using the South Coast AQMD online system (known as the Grant Management System (GMS)). A link to access the GMS will be available on February 7, 2025 at: [www.aqmd.gov/schoolbus](http://www.aqmd.gov/schoolbus). The GMS will allow applicants to submit their application electronically to the South Coast AQMD prior to the date and time the application is due. **Applications must be submitted through the GMS by April 18, 2025 at 3:00 PM.** The GMS will not allow applications to be submitted after the due date and time. South Coast AQMD "Business Information Forms" requiring signatures must be scanned and uploaded to the electronic application in PDF format.

First-time users must register as a new user to access the system. Applicants will receive a confirmation email after all required documents have been successfully uploaded.

### **Disposition of Applications:**

The South Coast AQMD reserves the right to reject any or all applications. All responses become the property of the South Coast AQMD. A copy of the proposal shall be retained for South Coast AQMD files. Additional copies and materials will be returned only if requested and at the applicant's expense.



## **SECTION VII: APPLICATION EVALUATION/SELECTION CRITERIA**

Given that funds may be limited, the program will prioritize funding awards to each school district with consideration for the older school buses and/or school buses with the highest accumulated mileage. Depending upon the number of applications received and the availability of funding, all the requests may not be funded in their entirety. Be aware that there is a possibility that due to program priorities, cost effectiveness or funding limitations (i.e., caps), applicants may be offered only partial funding, and not all applications meeting the eligibility criteria may be funded. South Coast AQMD retains discretion to make full awards, partial awards, or no awards.

All proposals will be evaluated based on criteria set forth in this PA. The South Coast AQMD will evaluate and/or verify information submitted by the applicant. Data verification during the evaluation and contracting process may cause initial project rankings, and associated awards, to change. Furthermore, the South Coast AQMD reserves the right to make adjustments to awards based on the subsequent verification of information as well as changes in project ranking. South Coast AQMD staff will evaluate all eligible online applications and make recommendations to the Governing Board for the final selection of project(s) to be funded.

Be aware that there is a possibility that due to program priorities, cost effectiveness or funding limitations (i.e., caps), applicants may be offered only partial funding, and not all applications meeting the eligibility criteria may be funded. South Coast AQMD retains discretion to make full awards, partial awards, or no awards.

## **SECTION VIII: PAYMENT TERMS**

1. Following receipt of the fully executed grant from South Coast AQMD, the school district must provide a copy of the grant agreement and key attachments to the selected vendor(s). Per the provisions of the grant, a purchase order shall be placed without delay to allow for the prompt delivery of the buses.
2. Funds will be paid on a reimbursement basis to the vendor, following the delivery of the new school bus(es) to the applicant (and all supporting documents required by the grant have been submitted satisfactorily).
3. Vendors should be encouraged to directly invoice South Coast AQMD for South Coast AQMD's share of funds. Applicants shall cooperate fully with the vendor to provide the vendor with the various documents South Coast AQMD would need before reimbursing the vendor. These documents are listed in the grant agreement.
4. Proof of vehicle delivery and supporting documents, as required in the grant, must accompany any request for reimbursement of approved funds. School districts must identify any options purchased over and above those included in the base price. Besides the fire suppression and/or gas detection systems, other discretionary options must be paid by the school district. The receipt of vehicle should be signed by the Director of Transportation before submission to South Coast AQMD.



5. Funds will be paid on a reimbursement basis at the time of completion of the infrastructure. Proof of completion shall accompany any request for reimbursement of approved funds. All request for reimbursement must be signed by the transportation director and received by South Coast AQMD. Monies owed will be paid directly to the infrastructure provider.

## **SECTION IX: LEGAL UPDATES**

### **CONFLICT OF INTEREST**

Applicant must address any potential conflicts of interest with other clients affected by actions performed by the firm on behalf of the South Coast AQMD. Although the applicant will not be automatically disqualified by reason of work performed for such firms, the South Coast AQMD reserves the right to consider the nature and extent of such work in evaluating the application. Conflicts of interest will be screened on a case-by-case basis by the South Coast AQMD General Counsel's Office. Conflict of interest provisions of the state law, including the Political Reform Act, may apply to work performed pursuant to this agreement. An example of a conflict of interest may occur when a consultant applying on behalf of an applicant for funding under the Carl Moyer Program is also contracted with South Coast AQMD.

### **COMPLIANCE WITH APPLICABLE LAWS**

Applicants must comply with all federal, state, and local laws, ordinances, codes and regulations. If the application is eligible for funding, all vehicles and/or equipment to be purchased, or installed must be compliant with all applicable federal, state, and local air quality rules and regulations, and will maintain compliance for the full Contract term.

### **COMPLIANCE WITH LABOR LAWS**

If an application is deemed eligible, the applicant will be required to provide any labor violations that have occurred within the last three years to be further considered for an award. If awarded, the contractor will be required to notify South Coast AQMD in writing if they have been found by a court or federal or state agency to have violated labor laws. The contractor will complete a yearly certification in which they will either state that they have not been found by a court or federal or state agency to have violated labor laws or, if such violations have been found, the contractor will give South Coast AQMD details about those violations in the certification. If the contractor has previously provided that information to the South Coast AQMD, they will be required to reattach that previous notification to the certification and provide any additional details about those violations that have not previously been provided. The contractor's yearly certification will be due at the same time as the annual progress reports. South Coast AQMD reserves the right to terminate the contract with a contractor that has been found to have violated labor laws, and the contractor may be required to return any and all contract funds, as determined by South Coast AQMD. The contractor will also ensure that these requirements are included in all subcontracts.

### **STATEMENT OF COMPLIANCE**

Government Code Section 12990 and California Administrative Code, Title II, Division 4, Chapter 5, require employers to agree not to unlawfully discriminate against any employee or applicant because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, sex, or age. A statement of compliance with this clause is included in all South Coast AQMD contracts.

**ECONOMIC SANCTIONS (RUSSIA/UKRAINE)**

On March 4, 2022, Governor Gavin Newsom issued Executive Order N-6-22 (EO) regarding sanctions in response to Russian aggression in Ukraine. Applicants who are considered eligible for funds under this Program Announcement and received executed contracts from South Coast AQMD, are obligated to comply with existing economic sanctions imposed by the U.S. government in response to Russia's actions in Ukraine.

**SECTION X - CONTACT FOR ADDITIONAL INFORMATION**

This Program Announcement and Application can be obtained by accessing the South Coast AQMD website at <http://www.aqmd.gov/nav/grants-bids>. South Coast AQMD staff members are available to answer questions during the application acceptance period. In order to help expedite assistance, please direct your inquiries to the applicable staff person, as follows:

For General, Administrative, or Technical Assistance, please contact:

**Kristina Voorhees**  
Air Quality Specialist  
Technology Advancement Office  
Phone 909-396-2440  
[kvoorhees@aqmd.gov](mailto:kvoorhees@aqmd.gov)

**Yuh Jiun Tan**  
Program Supervisor  
Technology Advancement Office  
Phone: 909-396-2463  
[ytan@aqmd.gov](mailto:ytan@aqmd.gov)

## Agenda Item #3

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Issue Program Announcement for  
Lower Emission School Bus Program

Yuh Jiun Tan

# Background

- Since 2001, South Coast AQMD has awarded nearly \$372 million in the Lower Emission School Bus program using various sources of funds such as Carl Moyer AB 923 Funds
- Replaced over 1,900 diesel school buses with alternative fuel and zero-emission buses and retrofitted 3,400 diesel school buses with particulate traps
- Allocate additional Carl Moyer Program AB 923 funds to replace combustion school buses



# Proposal

- Issue Program Announcement to solicit applications to replace older, polluting school buses with new zero emission buses
- Eligible Projects:
  - 2005 or older model year combustion school bus owned by Public School Districts
  - School Bus GVWR >14,000 lbs.
  - Have CHP certification for past 3 years



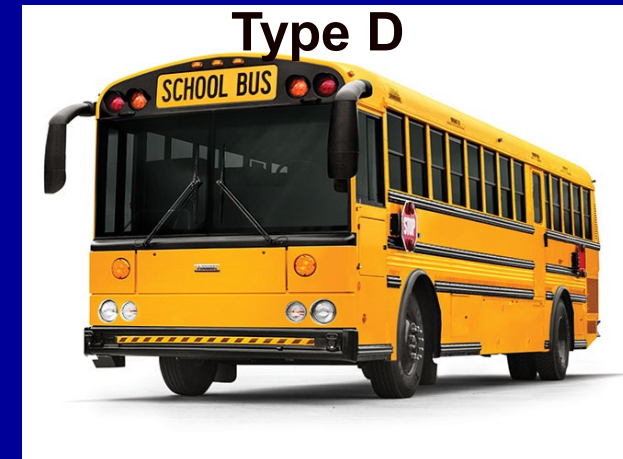
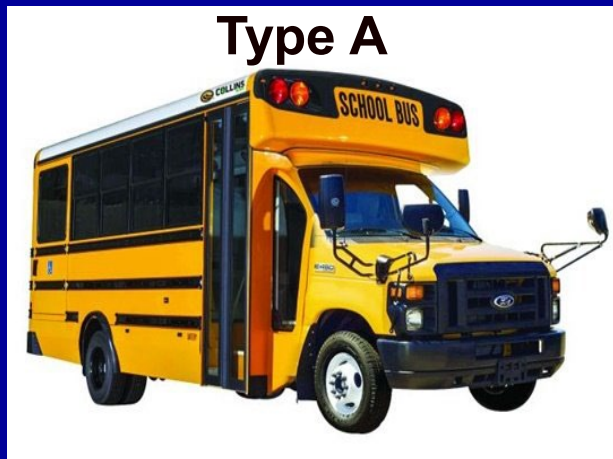


# Funding Amounts

School Bus Type	Max. Funding Amounts <sup>1,2</sup>	Infrastructure per School Bus
Type A	\$325,000	\$20,000
Type C or D	\$370,000	\$20,000

<sup>1</sup> Projects that receive other funding sources (such as HVIP) may still be eligible. All funding sources must be disclosed on the application.

<sup>2</sup> The funding amounts may be reduced if the project also receives other incentive funding.



# Summary of Recommended Actions

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- Allocate \$45 million from Carl Moyer Program AB 923 fund (80) for the Lower Emission School Bus Program
- Issue #PA2025-02 for school bus replacements under the Lower Emission School Bus Program
- Authorize the Executive Officer to execute contracts with public school districts for a total amount up to \$45M from Carl Moyer Program AB 923 Fund (80)





# Agenda Item #4

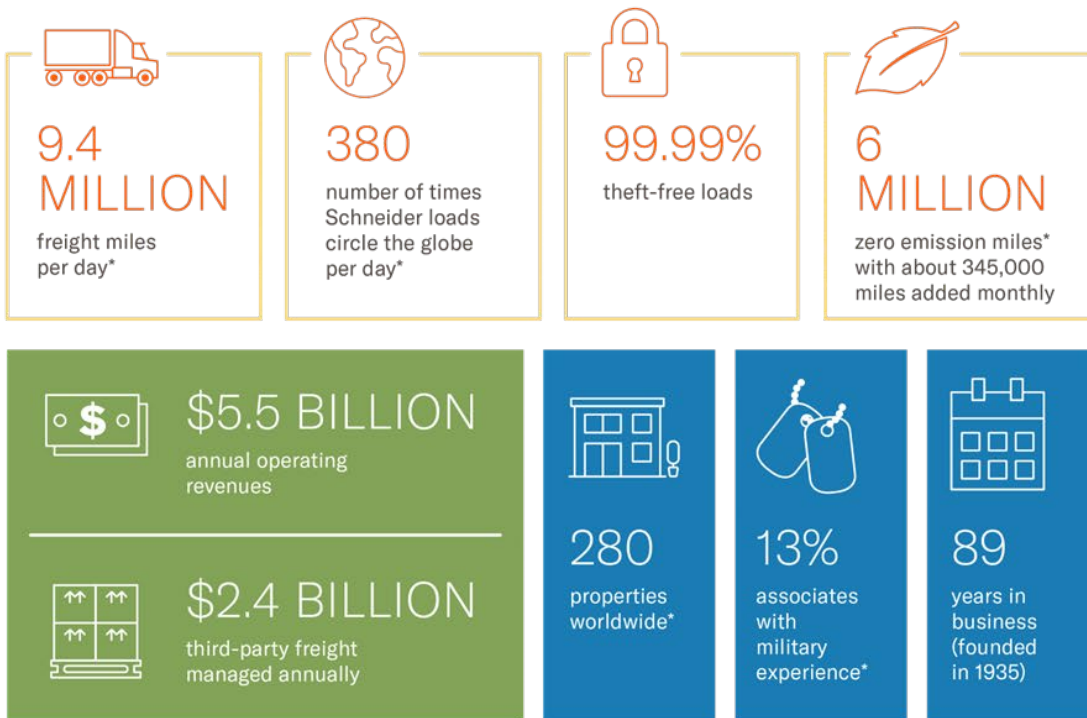
PIONEERING PROGRESS

**Our commitment  
to a sustainable  
future**

Jeremy Hock  
Schneider



# SCHNEIDER: by the numbers



Last updated Jan 2025

\*Number is an approximate

ALL THIS COULDN'T BE DONE WITHOUT:

### THE PEOPLE

- 19,250** associates worldwide\*
- 6,560** drivers who've driven more than one million miles safely\*
- 780** current drivers who've driven more than one million miles safely\*
- 925** current drivers with more than one million safe or 10 consecutive years of safe driving\*
- 22,000** and dignity for all qualified carrier relationships\*
- 2,010** owner-operator business relationships\*

### THE EQUIPMENT

- 12,200** company tractors\*
- 54,700** company trailers\*
- 27,430** intermodal containers\*
- 23,800** intermodal chassis\*





## Change through action

- **2025: Reduce CO<sub>2</sub> emissions** by 7.5% per mile.
- **2030: Double Intermodal size**, thus reducing CO<sub>2</sub> emissions by and additional 700 million pounds per year.
- **2035: Achieve a 60% reduction** in CO<sub>2</sub> emissions per mile.
- **2035: Reach carbon neutrality** in all company-owned facilities.





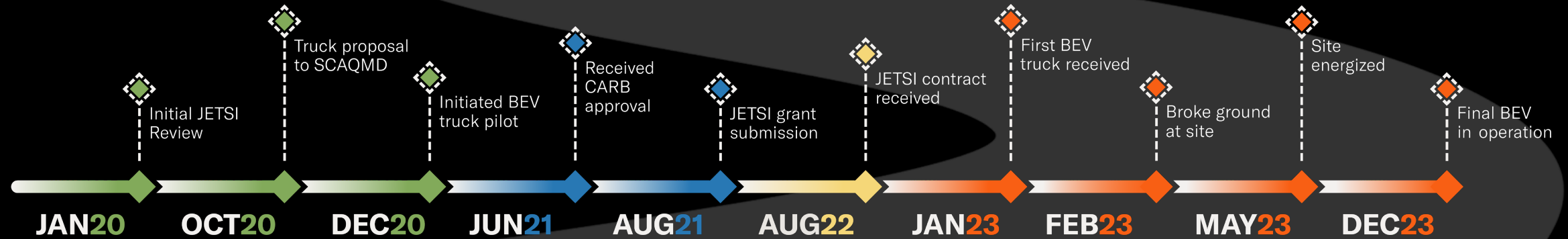
## Operations at scale

- **92 battery** electric trucks
- South El Monte, CA
- \$13.2 Million – JETSI Grant
- **24/7/365** local Intermodal drayage.
- On average, trucks cover **177 miles per shift.**
- **Charge to 80% in 90 minutes** via depot with 16 charging units.



# The road to electrification

## • DRIVING CHANGE



JETSI: Joint Electric Truck Scaling Initiative

CARB: California Air Resources Board

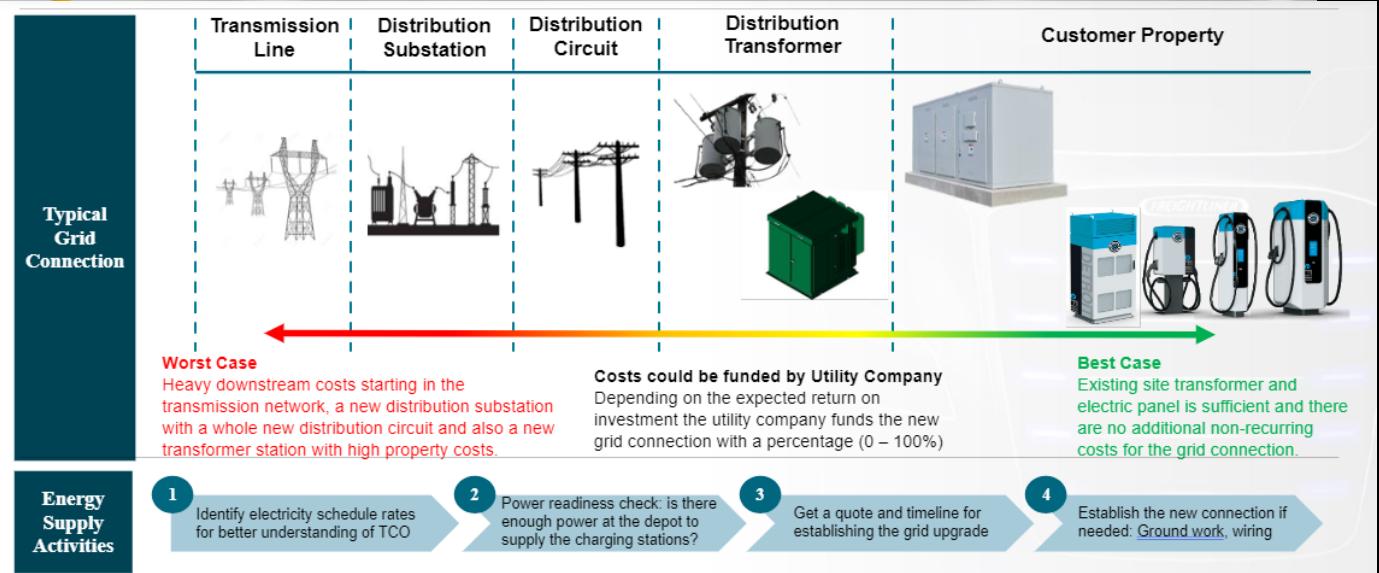
SCAQMD: South Coast Air Quality Management District



# Infrastructure modifications

Two-year process

- Grid upgrades to support an additional 4.8MW
- 4 **1.2MW NB15000** power cabinets
- 16 NBDC350 dual cord parallel chargers
- Over **16,000sqft**
- Daily energy consumption is equivalent to 2,000 homes







Schneider has delivered over six million zero emission miles

That's **over 20 million pounds** of carbon dioxide emissions avoided and the equivalent of:

**Over 2,100 gas-powered vehicles** removed from the road a year.

**SCHNEIDER**



## Lessons learned

- **Grid upgrade** delays
- Permitting
- Charging hardware changes over long build timeline
- **Driving characteristics** and range variations
- Equipment costs



**QUESTIONS?**

**Thank You**