

BOARD MEETING DATE: February 7, 2025

AGENDA NO. 18

REPORT: Technology Committee

SYNOPSIS: The Technology Committee held a hybrid meeting on Friday, January 24, 2025. The following is a summary of the meeting.

RECOMMENDED ACTION:
Receive and file.

Carlos Rodriguez, Chair
Technology Committee

AK:kr

Committee Members

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

Call to Order

Committee Chair Carlos Rodriguez called the meeting to order at 12:00 p.m.

For additional details of the Technology Committee Meeting, please refer to the [Webcast](#).

ACTION ITEMS:

- 1. Execute Contract to Develop and Demonstrate a Zero-Emission Transport Refrigeration Unit with Electric-Powered Trailer for Heavy-Duty Vehicles**
Sam Cao, Program Supervisor, Technology Advancement Office, presented on a proposed partnership with Range Energy and San Joaquin Valley Air Pollution Control District to demonstrate and validate an electric Transport Refrigeration Unit (TRU) 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. For additional details, please refer to the [Webcast](#) beginning at 4:27.

Mayor McCallon asked whether the battery pack powering the TRU is from the truck and whether it can operate for an entire work shift. Dr. Cao explained that the battery pack allows a full day of operation. For additional details, please refer to the [Webcast](#) beginning at 8:12.

Mayor Lock Dawson commented that it is a great and expensive project. For additional details, please refer to the [Webcast](#) beginning at 9:20.

Board Member Padilla-Campos asked whether this technology applies to rail containers as well. Dr. Cao explained that this project is focused only on a trailer application. For additional details, please refer to the [Webcast](#) beginning at 9:53.

Committee Chair Rodriguez asked whether similar technology is in development and the project completion date. Staff responded that similar technology exists for electrified recreation vehicles and that the TRU project is expected to be completed this year and a final report to staff in early 2026. For additional details, please refer to the [Webcast](#) beginning at 11:36.

Moved by Lock Dawson; seconded by McCallon; unanimously approved.

Ayes: Hagman, Lock Dawson, McCallon, Padilla-Campos, Rodriguez, Wagner
Noes: None
Abstain: None
Absent: None

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

Dr. Cao presented on two separate programs including the Joint Electric Truck Scaling Initiative (JETSU) Project and 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 JETSU Project. Delays with the charging infrastructure at one location requires 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 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 Electric Vehicle Supply Equipment (EVSE) Infrastructure Projects Special Revenue Fund (92); and 3) recognize revenue, upon receipt up to \$23,827,036 into Fund 92. For additional details, please refer to the [Webcast](#) beginning at 13:35.

Mayor McCallon and Supervisor Hagman commented that they do not have a financial interest but are required to identify for the record that they are members of the Mobile Source Air Pollution Reduction Committee, which is involved in this item.

Supervisor Hagman commented that utilities need to do better supplying power needed to charge battery electric trucks. For additional details, please refer to the [Webcast](#) beginning at 18:27.

Ranji George, public member, commented that more funding should be allocated to the hydrogen/fuel cell technologies and hydrogen refueling stations, and was concerned about battery recycling. For additional details, please refer to the [Webcast](#) beginning at 19:22.

Committee Chair Rodriguez inquired about utility regulations which cause delays and if there are changes planned for Public Utility Commission regulations. Aaron Katzenstein, Deputy Executive Officer, Technology Advancement Office responded that cost increases are mainly due to switchgear pricing increases and complexities with solar and energy storage and that South Coast AQMD is discussing with other project stakeholders and state agencies about these issues and will provide updates. Dr. Katzenstein also shared that streamlining is already happening with the switch gears as more projects select pre-built options instead of custom-built options to reduce cost and lead times. For additional details, please refer to the [Webcast](#) beginning at 22:44.

Moved by McCallon; seconded by Hagman; unanimously approved.

Ayes: Hagman, Lock Dawson, McCallon, Padilla-Campos, Rodriguez, Wagner
Noes: None
Abstain: None
Absent: None

3. Issue Program Announcement for Lower Emission School Bus Program

Yuh Jiun Tan, Program Supervisor, Technology Advancement Office, presented on the Lower Emission School Bus Program. 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. For additional details, please refer to the [Webcast](#) beginning at 27:24.

Mayor McCallon inquired if the Program Announcement will go out to all the school districts, does the bus need to be owned by the school district, and the number of school districts that own school buses. Ms. Tan confirmed that all public-school districts within the South Coast AQMD jurisdiction will be notified of the Program Announcement and that program guidelines require that school buses be owned by the school districts. Mayor McCallon further expressed concerns that the incentive for infrastructure may not be sufficient. Ms. Tan responded that the program guidelines limit the incentive amount for infrastructure, however, school districts are allowed to stack other incentive funding from other programs. For additional details, please refer to the [Webcast](#) beginning at 30:38.

Supervisor Hagman suggested that outreach for the program would be most effective through electronic communication targeted directly to school districts. Dr. Katzenstein assured that there will be several email blasts to school districts directly. For additional details, please refer to the [Webcast](#) beginning at 32:21.

Board Member Padilla-Campos inquired if the funding is replenished annually. Ms. Tan replied yes, funds are replenished annually. For additional details, please refer to the [Webcast](#) beginning at 34:22.

Committee Chair Rodriquez inquired about the number of buses the program could fund and the school district's possible reluctance to replace buses without adequate infrastructure. Ms. Tan responded that the program could support over 100 buses, but that can vary by the type of bus selected. Dr. Katzenstein explained that the chargers required for school buses are generally low-powered and are relatively more cost-effective and other incentive programs can also support infrastructure. For additional details, please refer to the [Webcast](#) beginning at 35:36.

Moved by Hagman; seconded by McCallon; unanimously approved.

Ayes: Hagman, Lock Dawson, McCallon, Padilla-Campos, Rodriguez, Wagner
Noes: None
Abstain: None
Absent: None

INFORMATIONAL ITEM:

4. Schneider's Commitment to a Sustainable Future

Jeremy Hock, Engineering and Sustainability Manager, Schneider National, presented 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 JETSI Pilot project. Schneider presented on their electrification experience that led to 6 million zero-emission (ZE) miles traveled to date that includes lessons learned. In addition, Mr. Hock shared a summary of Schneider's operation and electrification plans in California and beyond. For additional details, please refer to the [Webcast](#) beginning at 43:51.

Committee Chair Rodriguez commented on the success of the project. For additional details, please refer to the [Webcast](#) beginning at 53:45.

Mayor McCallon inquired about the truck developer and what percent of trucks are down for maintenance as part of this project. Mr. Hock responded that Daimler/Freightliner built electric trucks and that electric trucks report about a five percent downtime compared to one percent to two percent downtime historically reported for diesel trucks. For additional details, please refer to the [Webcast](#) beginning at 54:12.

Mayor Lock Dawson asked about Schneider's experience and cost on training and transitioning to ZE trucks. Mr. Hock shared that Schneider has entirely changed their operations to ensure electric trucks can meet the demand of customers while allowing EV trucks time to charge during a work shift and provide more training to ensure drivers operate EV trucks safely and efficiently. Mr. Hock commented that Schneider staff has received positive feedback from the drivers operating the battery electric trucks. For additional details, please refer to the [Webcast](#) beginning at 56:18.

Chair Rodriguez commented on the success of the project and asked if Schneider would duplicate the effort and lessons learned. Mr. Hock shared that Schneider is actively seeking additional sites and commented on the importance of operational configuration needs to match the technology with the demand of the customer and grid capacity and lead times. For additional details, please refer to the [Webcast](#) beginning at 53:45 and 1:00:35.

Committee Chair Rodriguez asked for upfront costs. Mr. Hock shared that EVSE is an extra upfront cost compared to diesel trucks where fueling is available. EV trucks are roughly three times the cost of diesel, between \$450,000 to \$500,000 per truck. For additional details, please refer to the [Webcast](#) beginning at 1:04:27.

OTHER MATTERS:

5. Other Business

There was no other business to report.

6. Public Comment Period

Mr. George expressed his concerns regarding battery disposal, stating that Southern California will need 20-30 battery recycling centers to handle the number of batteries being used and disposed. He expressed his concerns that these centers will be locations in disadvantaged communities. For additional details, please refer to the [Webcast](#) beginning at 1:07:49.

Chair Rodriguez commented that he has an interest in the best recommended practices in battery recycling and would like to understand the battery recycling process in the future. For additional details, please refer to the [Webcast](#) beginning at 1:11:06.

Executive Officer Wayne Nastri commented that a tour of battery recycling facilities might be beneficial, however it will be an out-of-state tour. For additional details, please refer to the [Webcast](#) beginning at 1:12:43.

7. Next Meeting Date

The next regular Technology Committee meeting is scheduled for Friday, February 21, 2025, at noon.

Adjournment

The meeting adjourned at 1:02 p.m.

Attachment

Attendance Record

ATTACHMENT

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
TECHNOLOGY COMMITTEE MEETING
Attendance Record – January 24, 2025**

| | |
|--|---|
| Supervisor Curt Hagman | South Coast AQMD Board Member |
| Mayor Patricia Lock Dawson | South Coast AQMD Board Member |
| Councilmember Larry McCallon | South Coast AQMD Board Member |
| Board Member Veronica Padilla-Campos | South Coast AQMD Board Member |
| Mayor Pro Tem Carlos Rodriguez | South Coast AQMD Board Member |
| Supervisor Donald Wagner | South Coast AQMD Board Member |
| | |
| Debra Mendelsohn | Board Consultant/Assistant (McCallon) |
| Fred Minassian | Board Consultant/Assistant (Padilla-Campos) |
| | |
| Tara Campbell | Board Consultant/Assistant (Wagner) |
| Ranji George | Public Member |
| Jeremy Hock | Schneider National, Inc. |
| Kara Leiterman | Public Member |
| Joonsik Maing | Public Member |
| Jenny Nguyen | Public Member |
| | |
| Maria Allen | South Coast AQMD Staff |
| Debra Ashby | South Coast AQMD Staff |
| Lara Brown | South Coast AQMD Staff |
| Cindy Bustillos | South Coast AQMD Staff |
| Sam Cao | South Coast AQMD Staff |
| Matthew Ceja | South Coast AQMD Staff |
| Penny Shaw Cedillo | South Coast AQMD Staff |
| Scott Gallegos | South Coast AQMD Staff |
| Sheri Hanizavareh | South Coast AQMD Staff |
| Roupen Kakouzian | South Coast AQMD Staff |
| Aaron Katzenstein | South Coast AQMD Staff |
| Angela Kim | South Coast AQMD Staff |
| Howard Lee | South Coast AQMD Staff |
| Tom Lee | South Coast AQMD Staff |
| Hay Lo | South Coast AQMD Staff |
| Ron Moskowitz | South Coast AQMD Staff |
| Ghislain Muberwa | South Coast AQMD Staff |
| Susan Nakamura | South Coast AQMD Staff |
| Wayne Nastri | South Coast AQMD Staff |
| Lisa Tanaka | South Coast AQMD Staff |
| Vasileios Papapostolou | South Coast AQMD Staff |
| Robert Paud | South Coast AQMD Staff |

Cynthia RavensteinSouth Coast AQMD Staff
Kristin Remy South Coast AQMD Staff
Mei WangSouth Coast AQMD Staff
Fan Xu South Coast AQMD Staff