

BOARD MEETING DATE: May 5, 2023
REPORT: Technology Committee

AGENDA NO. 20

SYNOPSIS: The Technology Committee held a hybrid meeting on Friday, April 21, 2023. The following is a summary of the meeting.

RECOMMENDED ACTION:
Receive and file.

Carlos Rodriguez, Chair
Technology Committee

AK:psc

Committee Members

Present: Councilmember Carlos Rodriguez, Chair
Supervisor Andrew Do
Board Member Gideon Kracov
Mayor Larry McCallon
Board Member Veronica Padilla-Campos

Absent: Supervisor Curt Hagman

Call to Order

Carlos Rodriguez, Chair 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 Contracts using U.S. EPA DERA Funds for Carl Moyer Truck Projects and Amend Contract with Sunline Transit Agency

In April 2020, the Board recognized a U.S. EPA Diesel Emissions Reduction Act (DERA) award of \$2,289,581 into the Clean Fuels Fund (31) for a Truck Trade Down Program. Due to low truck inventory, costs increase and CARB's Truck and Bus Regulation's compliance deadline, there is no longer a demand for this program. The funding will be reallocated to replace newer model year trucks eligible for the Carl Moyer Program. Also, in September 2020, the Board approved a contract with SunLine Transit Agency for \$5,906,601 to deploy five fuel cell transit buses using funding from a U.S. EPA FY19 Targeted Airshed Grant (TAG) award. Sunline

received Hybrid, and Zero-Emission Truck and Bus Voucher discounts and requested to add a bus to the project to utilize the balance of awarded U.S. EPA funds. These actions are to 1) authorize the Executive Officer to execute contracts using the FY19 DERA funds of \$2,106,405 for Carl Moyer zero-emission truck projects, 2) reimburse the General Fund (01) using FY19 DERA funds from the Clean Fuels Program Fund (31) up to \$63,176 for administrative costs, and 3) authorize the Executive Officer to execute a no-cost contract amendment with SunLine Transit Agency for the deployment of an additional fuel cell transit bus for a total of six buses.

Board Member Kracov commented that he does not have a financial interest but is required to identify for the record that he is a Board Member of CARB, which is involved in this item.

Board Member Padilla-Campos inquired why hydrogen fuel cell was used and not other technologies for the Sunline transit buses. Staff replied that the buses were to demonstrate transit buses powered by hydrogen. Board Member Padilla-Campos requested a presentation from grant recipients such as Sunline Transit regarding the project, and especially about challenges, best practices, pros and cons about the technology.

Mayor McCallon asked why the amount of funds being reallocated is different from the original award recognized. Staff replied that some funds were spent on administrative expenses to implement the Trade Down program.

Councilmember Rodriguez asked if the Sunline transit buses have already been in operation. Staff replied that all five buses awarded were in operation. The sixth bus will be delivered at a later date. Councilmember Rodriguez asked for an update when the bus comes into service. For additional details, please refer to the [Webcast](#) beginning at 5:56.

Moved by McCallon; seconded by Kracov; unanimously approved.

Ayes: Do, Kracov, McCallon, Padilla-Campos, Rodriguez
Noes: None
Abstain: None
Absent: Hagman

2. Execute Contract to Study Regional Air Quality and Health Impacts of Utilizing Hydrogen Blends in Commercial Buildings and Industrial Applications

The University of California, Irvine (UCI) has been awarded \$1.7 million by the CEC to lead a technical study to assess hydrogen's decarbonization potential in California's large commercial and industrial sectors. UCI is proposing to assess the

regional air quality impacts of hydrogen in end-use appliances within Commercial and Industrial applications. This action is to execute a contract with UCI in an amount not to exceed \$150,000 consisting of up to \$80,000 from Clean Fuels Program Fund (31) and up to \$70,000 from the Air Quality Investment Program Fund (27) EO Mitigation Fund.

Moved by Do; seconded by McCallon; unanimously approved.

Ayes: Do, Kracov, McCallon, Padilla-Campos, Rodriguez

Noes: None

Abstain: None

Absent: Hagman

Mayor McCallon inquired about the percentage of hydrogen blended in natural gas for this study. Staff responded that blends of higher than twenty percent would be evaluated in this study, including a hundred percent hydrogen. Staff also stated that NOx emissions change when different hydrogen blends are used in various burner technologies. As such, this study will evaluate the impact of hydrogen blending levels and burner technologies on NOx emissions at the exhausts.

Councilmember Rodriguez recognized the importance of this study in assessing air quality impacts within the South Coast Air Basin with specific emphasis on disadvantaged communities. For additional details, please refer to the [Webcast](#) beginning at 17:20.

INFORMATIONAL ITEM:

3. Powering the Grid Transition

Adam Simpson, Mainspring, provided an informational presentation on how linear generators operate and applications.

Board Member Kracov requested a staff update on South Coast AQMD proposed rules pertaining to linear technology. Mayor McCallon and staff cautioned about discussing these rules in this committee as they are already before the Stationary Committee. Board Member Kracov asked Mr. Simpson about local land use permitting, building safety codes and utility companies' interconnection activity issues. Mr. Simpson responded that most can be resolved with education.

Mayor McCallon commended Mainspring for being on Bloomberg news and inquired if the system is zero emission with hydrogen fuel. Mr. Simpson responded that the emissions are very low and comparable to the emissions from the hydrogen fuel cells.

Supervisor Do inquired about the monitoring equipment used for the Mainspring equipment. Mr. Simpson stated that they collect real-time monitoring data remotely from all installed units, which enables Mainspring to resolve the issues and perform source testing if necessary. Supervisor Do also inquired about the challenges with remote monitoring and the technical problems that might be encountered. Staff cautioned that the discussions are getting into rulemaking territory, which should be addressed at the Stationary Source Committee meeting and reiterated the questions should be limited to the technology and technical application of the units.

Councilmember Rodriguez inquired about the system setup at Colton and for the drayage truck charging at Port of Long Beach. He also asked if the technology is suitable as primary or backup power generation system at wastewater treatment facilities, commented that the system could be used to fill the grid shortfall and inquired about the lead time to manufacture the units. Mr. Simpson responded that the system can be used as both primary and backup power, and they are working with a wastewater facility to use their overproduced biogas and that it will take 6-9 months to produce and set up the system. Mr. Simpson also offered the trailer units which can be deployed quickly as emergency backup power.

Ranji George, Public Member, complimented the staff and the board for hosting Mainspring and asked if Mainspring has looked at the efficiency of the system.

Mark Abramowitz, Community Environmental Services, stated he was very excited about the technology presented but disagreed that fuel cells are zero emission. For additional details, please refer to the [Webcast](#) beginning at 32:52.

OTHER MATTERS:

4. Other Business

There was no other business to report.

5. Public Comment Period

Mr. George expressed his gratitude to staff for supporting hydrogen and Sunline Transit. Mr. George also encouraged staff to bring more hydrogen funding. For additional details, please refer to the [Webcast](#) beginning at 1:00:50

6. Next Meeting Date

The next regular Technology Committee meeting is scheduled for Friday, May 19, 2023, at noon.

Adjournment

The meeting adjourned at 1:05 p.m.

Attachment

Attendance Record

ATTACHMENT

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
TECHNOLOGY COMMITTEE MEETING**

Attendance Record – April 21, 2023

Supervisor Andrew Do	South Coast AQMD Board Member
Board Member Gideon Kracov	South Coast AQMD Board Member
Board Member Veronica Padilla-Campos.....	South Coast AQMD Board Member
Mayor Larry McCallon.....	South Coast AQMD Board Member
Councilmember Carlos Rodriguez	South Coast AQMD Board Member
Ron Ketcham.....	Board Consultant (McCallon)
Amy Wong.....	Board Consultant (Padilla-Campos)
Mark Abramowitz	Community Environmental Services
Ranji George	Public Member
Gillian Kaas.....	Public Member
Hay Lo	Public Member
Fred Minassian	Public Member
Uduak-Joe Ntak.....	Public Member
David Rothbart	Public Member
Andy Silva	Public Member
Adam Simpson	Mainspring
Charlene Wang	Public Member
Peter Whittingham.....	Public Member
Corrie Zupo	Mainspring
Debra Ashby	South Coast AQMD Staff
Scott Gallegos	South Coast AQMD Staff
Dan Garcia	South Coast AQMD Staff
Maryam Hajbabaei	South Coast AQMD Staff
Sheri Hanizavareh	South Coast AQMD Staff
Anissa Heard-Johnson	South Coast AQMD Staff
Mark Henninger	South Coast AQMD Staff
Aaron Katzenstein	South Coast AQMD Staff
Ruby Laity	South Coast AQMD Staff
Joseph Lopat	South Coast AQMD Staff
Ron Moskowitz	South Coast AQMD Staff
Wayne Nastri.....	South Coast AQMD Staff
Susan Nakamura.....	South Coast AQMD Staff
Vasileios Papapostolou.....	South Coast AQMD Staff
Penny Shaw Cedillo	South Coast AQMD Staff
Walter Shen.....	South Coast AQMD Staff
Yuh Jiun Tan.....	South Coast AQMD Staff
Lisa Tanaka O’Malley	South Coast AQMD Staff
Elizabeth Vega	South Coast AQMD Staff
Donna Vernon	South Coast AQMD Staff
Mei Wang.....	South Coast AQMD Staff
Paul Wright	South Coast AQMD Staff