

BOARD MEETING DATE: November 1, 2019

AGENDA NO. 26

REPORT: Technology Committee

SYNOPSIS: The Technology Committee held a meeting on Friday, October 18, 2019. The following is a summary of the meeting.

RECOMMENDED ACTION:
Receive and file.

Judith Mitchell, Acting Chair
Technology Committee

MMM:av

Committee Members

Present: Supervisor Lisa Bartlett (videoconference)
Supervisor Janice Hahn (videoconference)
Mayor Judith Mitchell (videoconference)
Council Member Dwight Robinson

Absent: Council Member Joe Buscaino/Chair

Call to Order

Acting Chair Mitchell called the meeting to order at 12:00 p.m.

ACTION ITEMS:

1. Approve Additional Funds for Replacement of Onboard CNG Fuel Tanks on School Buses and Authorize Execution of Grant Agreements

Since 2001, the South Coast AQMD has replaced over 1,600 pre-1994 diesel school buses, primarily with cleaner CNG school buses. The fuel tanks on these CNG school buses have a manufacturer's service life of approximately 15 years. In April 2012, the Board issued a Program Announcement using \$3 million from the Carl Moyer Program AB 923 Fund (80) for public school districts offering funding to replace onboard CNG fuel tanks on a first-come, first-served basis. Subsequently, in November 2016 and September 2017, the Board approved additional funds of

\$2 million and \$3 million, respectively. These funds are nearly exhausted. These actions are to approve \$3 million from the Carl Moyer Program AB 923 Fund (80) to continue the replacement of onboard CNG fuel tanks for public school buses on a first-come, first-served basis and authorize execution of those grant agreements until funds are exhausted.

Moved by Hahn; seconded by Bartlett; unanimously approved.

Ayes: Bartlett, Hahn, Mitchell, Robinson

Noes: None

Absent: Buscaino

2. Establish Special Revenue Fund, Recognize Revenue and Transfer Funds, and Execute Agreements to Develop and Demonstrate Water-in-Fuel Retrofit Technology for Ocean-Going Vessels

MAN Energy Solutions USA Inc. (MAN) proposes to develop, install and demonstrate a retrofit technology to reduce NOx emissions from ocean-going vessels (OGVs). For the proposed project, the retrofit technology will be installed, tested and demonstrated on one of MSC Shipmanagement Limited Tier 2 vessels. These actions are to establish the Clean Shipping Technology Demonstration Special Revenue Fund (83), recognize up to \$1 million from San Pedro Bay Ports' Technology Advancement Program and transfer up to \$2 million from Air Quality Investment Fund (27) into Fund 83, execute an MOU with the Ports for this demonstration project, and execute a contract with MAN in an amount not to exceed \$3 million to install, test and demonstrate the water-in-fuel retrofit technology for OGVs.

Supervisor Hahn inquired about the vessel and number of port calls anticipated under the pilot program estimated to cost \$3.2 million. Staff explained that MSC will provide the vessel and they are the second largest shipping line in the world. Further, the proposed demonstration project includes MAN's S90 engine that is found in numerous vessels that have an aggregated 700 calls to the local ports over the past 3 years. Staff also emphasized that the project includes a process for CARB Verification for a retrofit technology.

Mayor Mitchell commented on the potential commercialized cost. Staff indicated that the anticipated cost is \$500,000 to \$750,000 for each ship.

Supervisor Hahn asked when the technology will become commercially available and if the implementation is voluntary. Staff responded that the commercialized retrofit technology is expected to be available within three years and there is no regulatory requirement to retrofit the vessels.

Mayor Mitchell inquired about the specific use of the technology and its potential emission reduction benefits. Staff explained that the vessel will use this technology within the vessel speed reduction (VSR) zone and that it is expected to provide up to 40% NOx reduction.

Council Member Robinson asked how the data will be collected in the open sea. Staff responded that the vessel will be data logged and sensors will be installed to monitor emissions and other parameters including vessel speed. Council Member Robinson also asked about the use of retrofit technologies in Asia. Staff explained that currently there is no motivation for this type of retrofit, so staff is focusing on the PRIMER Incentive programs with Asian ports.

Supervisor Hahn asked how the technology works and how it may be used. She also expressed concern about the funding and if the number of calls would provide enough data. Staff explained that a separate emulsion tank will combine the water and fuel and inject into the combustion chamber within 40 nautical miles.

Ranji George, a member of the public, commented that the scale of funding is almost a third of the annual Clean Fuels Fund, and that the funds should be used for other purposes.

Supervisor Bartlett expressed concern on the balance between engine efficiency and the retrofit technology. Staff explained that use of the technology under low speed operation is expected to have a negligible impact on fuel consumption. However, emissions reductions and fuel efficiency will be monitored as part of the project.

Council Member Robinson and Mayor Mitchell expressed their support for this project.

Moved by Robinson; seconded by Hahn; unanimously approved.

Ayes: Bartlett, Hahn, Mitchell, Robinson

Noes: None

Absent: Buscaino

3. Execute Agreements to Establish Endowments to Support Graduate Student Scholarship Fund

In April 2019, the Board released an RFP to solicit proposals to support university graduate student scholarships that will, in part, train students entering the workforce, along with guidance from South Coast AQMD, on the emerging issues and latest research related to air quality and climate change. This action is to execute agreements to establish one-time endowments to the National Fuel Cell Research Center at the University of California, Irvine and the California State University, Los

Angeles in the amount of \$1,000,000 and \$250,000, respectively, from interest accrued in the BP ARCO Settlement Projects Fund (46).

Mayor Mitchell inquired if Cal State University, Los Angeles (CSULA) has a graduate school program and if the program will be implemented through the interest collected on the Endowment Funds. Staff explained that CSULA has graduate programs that include hydrogen research and they operate a hydrogen fueling facility. Staff added that the University of California, Irvine scholarship programs will be sustained with interest proceeds from the endowment and staff plans to work with CSULA through its role on the advisory board to identify the best approach, considering the smaller amount.

Moved by Robinson; seconded by Bartlett; unanimously approved.

Ayes: Bartlett, Hahn, Mitchell, Robinson

Noes: None

Absent: Buscaino

4. Recognize Revenue, Transfer Funds, Amend Contracts for Enhanced Fleet Modernization Program and Reimburse General Fund for Administrative Costs

Since 2015, the South Coast AQMD has been implementing an Enhanced Fleet Modernization Program (EFMP), branded as Replace Your Ride. For FY 2018-19, CARB has allocated \$12 million in Low Carbon Transportation funds to the South Coast AQMD for the continued implementation of the EFMP. These actions are to: 1) recognize up to \$12 million for the EFMP Plus-Up Program from CARB with the terms and conditions of the grant award; 2) transfer up to \$3 million as a temporary loan from the AB 923 Fund (80); 3) approve vouchers or other alternative mobility options until all available funds are exhausted; 4) amend contracts; and 5) reimburse the General Fund for administrative costs necessary to implement the EFMP.

Mayor Mitchell commented that she does not have a financial interest or conflict of interest, but is required to identify for the record that she is a Board Member of CARB which is involved in this item.

Supervisor Bartlett inquired about the use of additional funds for the two contractors and if staff tracks the vouchers and follows-up with the vehicle owners. Staff explained that the two contractors provide case management support to the applicants under this program and the additional funds will be used for staff time involved in case management. Staff also explained that the program database includes detailed vehicle type information and has the capability to track ownership experience of the replacement vehicle.

Moved by Bartlett; seconded by Robinson; unanimously approved.

Ayes: Bartlett, Hahn, Mitchell, Robinson

Noes: None

Absent: Buscaino

DISCUSSION ITEM:

5. Cleans Fuels Program Draft 2019 Plan Update

Every fall, staff has brought the Clean Fuels Program Draft Plan Update before the Board Technology Committee to solicit input on the proposed distribution of potential project funds for the upcoming year before requesting final approval for the Plan Update each year in early spring. Staff proposes continued support for a wide portfolio of technologies, but with particular emphasis on heavy-duty truck technologies with zero and near-zero emissions for goods movement applications to create a pathway towards achieving 2023 attainment as well as a continued focus on preparing for hydrogen vehicle deployments and EV charging infrastructure.

Council Member Robinson asked about the hydrogen infrastructure and supply chain issues. Staff explained that funding has been awarded statewide for 68 stations by the CEC, and that half of those stations are located in the South Coast AQMD. Staff further summarized the recent hydrogen supply issues, currently mainly provided by Air Products, and explained the recent transition to larger, liquid H₂ stations. Council Member Robinson also asked if there is interest in market investment. Staff explained that there are no retail heavy-duty stations yet, but several are in development under the Zero-Emission and Near Zero-Emission Freight Facilities (ZANZEFF) projects and one that is being funded by CEC, with cost share from the Clean Fuels Fund.

Mayor Mitchell inquired about the higher funding amount for hydrogen, compared to electric infrastructure. Staff informed the committee that hydrogen infrastructure is more expensive to implement because it is early in the technology's development.

Ranji George, a member of the public, commented that more funding should be dedicated to hydrogen technology instead of battery powered vehicles, and expressed his support for battery recycling funding. He requested that the South Coast AQMD take a leadership role and increase funding for hydrogen projects.

OTHER MATTERS:

6. Other Business

Council Member Robinson suggested having an offsite meeting/tour at the Ports. Mayor Mitchell supported the suggestion.

7. Public Comment Period

There were no public comments.

8. Next Meeting Date

The next regular Technology Committee meeting is scheduled for Friday, November 15, 2019 at noon.

Adjournment

The meeting adjourned at 1:04 p.m.

Attachment

Attendance Record

ATTACHMENT

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
TECHNOLOGY COMMITTEE MEETING
Attendance Record – October 18, 2019**

Supervisor Lisa Bartlett (videoconference).....	SCAQMD Board Member
Supervisor Janice Hahn (videoconference).....	SCAQMD Board Member
Mayor Judith Mitchell (videoconference).....	SCAQMD Board Member
Council Member Dwight Robinson	SCAQMD Board Member
Andy Silva.....	Board Consultant (Rutherford)
Ranji George.....	Public Member
Bridget McCann	Western States Petroleum Association
Tammy Yamasaki.....	Southern California Edison
Al Baez	SCAQMD Staff
Naveen Berry.....	SCAQMD Staff
Marjorie Eaton.....	SCAQMD Staff
Liliana Garcia	SCAQMD Staff
Seungbum Ha	SCAQMD Staff
Joseph Impullitti	SCAQMD Staff
Ashkaan Nikravan	SCAQMD Staff
Quintus Lee	SCAQMD Staff
Tom Lee	SCAQMD Staff
Megan Lorenz.....	SCAQMD Staff
Matt Miyasato.....	SCAQMD Staff
Ash Nikravan.....	SCAQMD Staff
Elaine Shen.....	SCAQMD Staff
Alejandra Vega.....	SCAQMD Staff
Kristina Voorhees.....	SCAQMD Staff
Mei Wang	SCAQMD Staff
Vicki White	SCAQMD Staff