

BOARD MEETING DATE: February 3, 2017

AGENDA NO. 22

REPORT: Technology Committee

SYNOPSIS: The Technology Committee met on January 20, 2017. Major topics included Technology Advancement items reflected in the regular Board Agenda for the February Board meeting. A summary of these topics with the Committee's comments is provided. The next Technology Committee meeting will be held on February 17, 2017.

RECOMMENDED ACTION:
Receive and file.

Joe Buscaino
Technology Committee Chair

MMM:pmk

Attendance: Councilmember Joe Buscaino participated by videoconference. Supervisor Sheila Kuehl, Mayor Pro Tem Larry McCallon, Councilmember Judith Mitchell, Councilmember Dwight Robinson and Supervisor Janice Rutherford were in attendance at SCAQMD headquarters.

FEBRUARY BOARD AGENDA ITEMS

On the motion of Chair Buscaino, moved by Mitchell, seconded by Rutherford, the committee unanimously approved agenda items 2, 4, and 5.

Ayes: Buscaino, Kuehl, McCallon, Mitchell, Robinson and Rutherford

Noes: None

Absent: None

1. Execute Contracts to Conduct In-Use PM Emission Study for Gasoline Direct Injection Vehicles and Establish Renewable Natural Gas Research Center

Since mobile sources represent the largest NO_x and PM sources in the South Coast Air Basin, the Draft 2016 AQMP identifies development and implementation of new

technologies to reduce mobile source emissions as a key strategy. It is also equally important to assess new technologies to prevent or mitigate any negative impact on air quality and public health. The University of California Riverside (UCR) CE-CERT recently submitted two unsolicited proposals that address these needs and staff recommends cost-sharing the proposed projects to: 1) conduct an in-use emission study to characterize tailpipe PM emissions from gasoline direct injection vehicles under real-world driving conditions; and 2) support establishment of a research center to study promising renewable natural gas production technologies to expedite commercial implementation. This action is to execute contracts with UCR CE-CERT to cost-share these projects in an amount not to exceed \$322,000 from the Clean Fuels Fund (31).

Councilmember Mitchell and Supervisor Kuehl asked how the proposed in-use emission study differs from other tests previously conducted. Staff explained that the key difference is the use of portable emission measurement systems (PEMS) in real world driving conditions in the proposed project, whereas previous testing was mostly conducted using chassis dynamometers. Councilmember Mitchell concurred that field testing is beneficial.

As a part of public comments, Harvey Eder of the Public Solar Power Coalition voiced caution over supporting the proposed RNG center due to his concern with the safety of RNG produced from biomass feedstock that might have been tainted with antibiotics that are harmful to human health. Staff informed the Committee that the research center will investigate various RNG technologies, including Power-to-Gas using solar and wind power, not just bio-based feedstocks, and further clarified that the produced gas is pure methane, generally with significantly lower impurities than pipeline natural gas.

Moved by McCallon; seconded by Robinson; unanimously approved.

Ayes: Buscaino, Kuehl, McCallon, Mitchell, Robinson and Rutherford

Noes: None

Absent: None

2. Renew SCAQMD's Membership in CaFCP for Calendar Year 2017, Provide Office Space for CaFCP, and Receive and File California Fuel Cell Partnership Executive Board Meeting Agenda and Quarterly Updates 

The SCAQMD has been a member of the California Fuel Cell Partnership (CaFCP) since early 2000. This action is to renew SCAQMD's membership in the CaFCP in an amount not to exceed \$70,000 for Calendar Year 2017 and cofund 50 percent of the CaFCP Regional Coordinator position located at SCAQMD in an amount not to exceed \$50,000 from the Clean Fuels Fund (31). Further actions are to continue providing in-kind office space and utilities for CaFCP employees in 2017 in an

effort to educate the public and increase CaFCP's presence in Southern California. Finally, this action is to receive and file the CaFCP Executive Board Meeting Agenda for October 18, 2016, and Quarterly Updates beginning April and July 2016.

3. Recognize Revenue and Execute Contract for Development of Ultra-Low Emission Diesel Engine for On-Road Heavy-Duty Vehicles

On July 7, 2016, the Board released a Request for Information to obtain technical information on ultra-low NOx emission technologies for heavy-duty diesel engines. Two responses were received, one of which was from the Southwest Research Institute (SwRI). CARB had previously awarded a contract to SwRI to investigate and demonstrate emission control strategies for 13-liter diesel engines to achieve 90% emission reductions compared to the current NOx standard. As a follow-on to this successful demonstration project, CARB and the Port of Los Angeles (POLA) have expressed interest in cofunding the advancement of current larger displacement diesel engines to achieve ultra-low NOx emissions. Staff proposes to cost-share the project. CARB will contract directly with SwRI while the POLA cofunding will pass through the SCAQMD. These actions are to recognize up to \$287,500 from POLA and execute a contract with SwRI for development of an ultra-low emission heavy-duty diesel engine in an amount not to exceed \$575,000 from the Clean Fuels Fund (31).

Councilmember Buscaino indicated that this technology is exactly what is needed for port and regional NOx emission benefits and inquired about a potential increase in PM emissions. Staff responded that the goal is to ensure PM emissions remain below the standard and may be minimized or eliminated with renewable diesel.

Supervisor Kuehl inquired about fossil and renewable diesel and suggested that renewable diesel be part of the project. Staff concurred to include renewable diesel as part of the testing.

Councilmember Mitchell asked whether the project would be for the larger displacement engine and further inquired about the difference between bio- and renewable diesel. Staff verified this project would be for the 15L engine typically used for long haul trucking, and provided the key differences in feedstocks and respective emission profiles for bio and renewable diesel.

Councilmember Robinson inquired about durability testing, and staff replied that this is expected to be part of the next phase of the development effort.

As a part of public comments, Harvey Eder indicated that PM is still generated with renewable diesel and that focus should be on solar electric battery and fuel cell vehicles.

Moved by Mitchell; seconded by McCallon; unanimously approved.

Ayes: Buscaino, Kuehl, McCallon, Mitchell, Robinson and Rutherford

Noes: None

Absent: None

4. Issue Program Announcement for Ships at Berth and Cargo Handling Equipment Projects Under Proposition 1B-Goods Movement Program 

In September 2015, CARB approved Proposition 1B-Goods Movement Program funding awards to local agencies for projects that will reduce emissions from freight transportation. The award for the Los Angeles/Inland Empire trade corridor included \$14.1 million for ships at berth and cargo handling equipment projects. Following an earlier solicitation issued on February 5, 2016, and subsequent awards, there are still funds available for projects in this category. This action is to issue a Program Announcement for ships at berth and cargo handling equipment projects under the Proposition 1B-Goods Movement Program.

5. Recognize, Transfer and Appropriate Revenue, Amend and Execute Contracts, and Approve Eligible Participant Vouchers to Continue Implementation of Enhanced Fleet Modernization Program

Last September, the Board recognized up to \$10 million from CARB, approved issuance of vouchers to continue the Enhanced Fleet Modernization Program (EFMP) Plus-Up for FY 2016-17, and released an RFP to solicit proposals to administer the application process and conduct vehicle emissions testing. Subsequently, CARB advised that SCAQMD would receive \$15 million. Additionally, older vehicles retired under the EFMP are crushed for scrap metal generating revenue for EFMP. These actions are to: 1) recognize revenue up to \$5 million from CARB and up to \$500,000 from the scrap metal value of the vehicles retired under the EFMP into the HEROS II Special Revenue Fund (56); 2) authorize the Executive Officer to approve vouchers to qualified participants up to \$4,250,000 and execute agreements with participating dismantlers, dealerships and financial institutions; 3) amend and execute contracts for a total amount not to exceed \$765,000 from the HEROS II Special Revenue Fund (56); and 4) transfer and appropriate \$250,000 from the HEROS II Special Revenue Fund (56) into Science and Technology Advancement's FY 2016-17 and/or 2017-18 Budget for EFMP implementation and outreach.

INFORMATION ITEM ONLY

6. EVSE Installation and Charging Policy Recommendations

(Presentation only)

Installation of Level 2 chargers at the SCAQMD headquarters facility started in October 2016 with the first phase of installation of Level 2 chargers at the upper deck completed. Additional phases of installation at the solar carport, CC8 and the front lobby will be completed in spring 2017. Staff will present an update on the EVSE installation and on charging policy recommendations.

In response to an inquiry by Councilmember Mitchell, staff indicated that the chargers can be operated with a specific smart phone application or a radio-frequency identification (RFID) card, bill the user with a credit card, and be fully integrated with the building's energy management system. This will allow smart charging to minimize electricity costs by minimizing demand charges.

Supervisor Kuehl stated that alternative work hours to minimize daytime higher electricity rates could be a consideration as more electric vehicles are charging and further suggested promoting battery recycling programs.

Councilmember Robinson informed the committee that the City of Lake Forest charges \$5/hour after 4 hours and the proposed \$1/hour may be too low to discourage drivers from exceeding necessary time to charge. He also indicated that his company provides workplace charging without a cost to the employees as an incentive. Mayor Pro Tem McCallon concurred that a higher hourly rate may be more effective in having people move their cars. Councilmember Mitchell felt that 6 cents/kWh was pretty reasonable. Staff responded that they would consult employee bargaining units about this policy before initiating the cost recovery program, with reconsideration in 12 months.

7. Other Business

There was no other business.

8. Public Comments

There were no public comments.

Next Meeting: February 17, 2017

Attachment

Attendance

ATTACHMENT

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

Attendance – January 20, 2017

Councilmember Joe Buscaino (via videoconference).....SCAQMD Governing Board
Supervisor Sheila Kuehl.....SCAQMD Governing Board
Mayor Pro Tem Larry McCallonSCAQMD Governing Board
Councilmember Judith Mitchell.....SCAQMD Governing Board
Councilmember Dwight Robinson.....SCAQMD Governing Board
Supervisor Janice RutherfordSCAQMD Governing Board
Mark AbramowitzBoard Consultant (Lyou)
Ron Ketcham.....Board Consultant (McCallon)
Diane Moss.....Board Consultant (Kuehl)
Marisa PerezBoard Consultant (Mitchell)
Wayne Nastri.....SCAQMD Staff
John Olvera.....SCAQMD Staff
Ruby Fernandez.....SCAQMD Staff
Sheri Hanizavareh.....SCAQMD Staff
Matt Miyasato.....SCAQMD Staff
Henry HogoSCAQMD Staff
Fred MinassianSCAQMD Staff
Naveen Berry.....SCAQMD Staff
Dean SaitoSCAQMD Staff
Al BaezSCAQMD Staff
Lori BerardSCAQMD Staff
Brian Choe.....SCAQMD Staff
Dave Coel.....SCAQMD Staff
Seungbum HaSCAQMD Staff
Drue HargisSCAQMD Staff
Patricia Kwon.....SCAQMD Staff
Joseph Lopat.....SCAQMD Staff
Lisa Mirisola.....SCAQMD Staff
Mei WangSCAQMD Staff
Vicki WhiteSCAQMD Staff
Paul Wright.....SCAQMD Staff
Alejandra Vega.....SCAQMD Staff
Pat KrayserSCAQMD Staff
Harvey Eder.....Public Solar Power Coalition
Susan StarkTesoro
Timothy Lippman.....Los Angeles County

Katy YoungLos Angeles County