

BOARD MEETING DATE: February 6, 2015

AGENDA NO. 18

REPORT: Technology Committee

SYNOPSIS: The Technology Committee met on January 23, 2015. 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 on February 20, 2015.

RECOMMENDED ACTION:  
Receive and file.

Dennis R. Yates  
Acting Technology Committee Chair

MMM:pmk

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**Attendance:** Mayor Dennis Yates, in attendance at District headquarters, chaired the meeting in Supervisor John Benoit's absence, and appointed Councilmember Michael Cacciotti as a one-time Committee Member for today's meeting. Councilmember Joe Buscaino participated by videoconference. Mayor Miguel Pulido was in attendance at SCAQMD headquarters. Councilmember Judith Mitchell was absent.

#### **FEBRUARY BOARD AGENDA ITEMS**

**1. Recognize Funds, Adopt Resolution to Extend Caltrans Grant Agreement, and Execute and Amend Contracts**

On February 7, 2014, the Board recognized EPA funds for diesel emissions reduction projects under the Diesel Emissions Reduction Act (DERA). This action is to recognize \$110,627 in additional Fiscal Year 13 (FY13) DERA funds into the Lower-Emission School Bus Fund (33) and execute contracts totaling \$825,000 from the Lower-Emission School Bus Fund (33) to replace diesel school buses with electric buses. This action is also to adopt a resolution to extend a Caltrans grant agreement and amend contracts to reallocate unused funds for replacement of heavy-duty diesel trucks with CNG trucks totaling \$350,000 from the Proposition 1B-

Goods Movement Program Fund (81). Finally, this action is to execute and amend contracts at no additional cost under the Proposition 1B and Carl Moyer Programs.

*Staff commented that Wells Fargo Equipment changed their preference and now prefers purchase option over lease-to-own option for the truck replacement program. As such, staff concluded not to move forward with the Recommended Action to execute a contract with Wells Fargo Equipment and will revise the Board Letter accordingly.*

*Mayor Pulido asked about the range of the electric buses. Staff indicated that the range is between 80 and 120 miles. Councilmember Cacciotti asked for the cost of electric versus CNG buses supported by SCAQMD, and the cost of ownership over the life of an electric bus. Staff responded that the cost of a school bus is \$260,000 for Type C electric bus, \$176,000 for Type D CNG bus, \$125,000 for a Type C diesel bus, and \$148,000 for a Type D diesel bus. In addition, staff experience on commercial electric buses is limited given that only a few of the buses are being operated by school districts. Staff will be collecting such information to help determine actual operating cost to end users.*

*Mayor Pulido requested that in addition to the total cost of ownership, staff should also include the health impacts of a diesel bus compared to an electric bus. Staff agreed to incorporate this information.*

*Councilmember Buscaino asked whether staff have an inventory of buses across school districts in the area represented by SCAQMD, and whether the information is accessible to the general public. Staff responded that although a survey was conducted in 2012, staff will provide the data to the committee.*

*Moved by Pulido; seconded by Cacciotti; unanimously approved.*

## **2. Execute Contracts for Advanced Optical Remote Sensing Technologies at Refineries, Other VOC Sources and Marine Vessels**

Recent advances in optical remote sensing (ORS) technology have made it possible to quantify fugitive emissions from an entire refinery complex and other sources. In September 2014, an RFP was issued to conduct a series of measurements intended to fully characterize and quantify fugitive and stack emissions from large refineries, other important VOC sources and marine vessels and to develop remote sensing technologies with the intent of providing real-time data capability. Several proposals were received from different contractors and evaluated to select the most competitive bids. This action is to execute contracts with multiple contractors employing a variety of different advanced ORS technologies in an amount not to exceed \$1,100,805 from the Rule 1118 Mitigation Fund (54).

*Mayor Yates asked if refinery emission measurements could fluctuate with time and be impacted by variable meteorological conditions. Staff replied saying that although the proposed study will be conducted in September/October 2015 (when weather conditions are typically ideal for these types of measurements) previous studies have shown that refinery-wide emissions of VOCs do not vary substantially throughout the year. Councilmember Cacciotti asked about the dimensions and principle of operation of the instruments that will be used to conduct Projects 1 through 3. Staff explained that all of these devices will be either mounted on a van to take mobile measurements or placed at the refinery fence-line for upwind and downwind measurements. Staff also clarified that refinery emissions will be estimated by combining optical remote sensing and wind profile data.*

*Moved by Pulido; seconded by Cacciotti; unanimously approved.*

### **3. Recognize Funds and Execute Contract for Heavy-Duty Advanced Technology Assessment**

NOx emissions from on-road heavy-duty diesel trucks are the largest contributor to ozone and fine particulate air quality in the South Coast Air Basin. As such, there is a need to better understand and plan for the deployment of zero and near-zero emission advanced technologies in this sector. The Southern California Gas Company (SoCalGas) has expressed interest in cofunding a study that would help achieve this objective. This action is to recognize \$250,000 from SoCalGas into the Clean Fuels Fund (31). This action is to also execute a contract with U.S. DOE's National Renewable Energy Laboratory to develop a detailed technology and economics-based assessment for the deployment of advanced heavy-duty vehicle technologies suitable in commercial fleet applications in an amount not to exceed \$500,000 from the Clean Fuels Fund (31).

*Mayor Pulido asked for the NOx emissions contributions to the inventory by heavy-duty diesel vehicles, locomotives, and ships. Staff responded that heavy-duty diesel vehicles, ships, and locomotives contribute 15 percent, 13 percent, and 7 percent, respectively, to the emissions inventory. In addition, it was indicated that a chart in the 2012 AQMP shows heavy-duty diesel trucks as the number one contributor to the NOx emissions inventory, marine vessels as the number three contributor, locomotives as the number five contributor, airplanes as the number six contributor, and RECLAIM sources as the number four contributor to the NOx emissions inventory.*

*Moved by Pulido; seconded by Cacciotti; unanimously approved.*

**4. Execute and Modify Contracts for Hydrogen Station Upgrades and Related Work** 

In March and September 2014, the Board approved contracts for hydrogen station upgrades in the South Coast Air Basin. While these stations are being upgraded, the equipment must be taken out of service. To continue to provide hydrogen fuel to customers at these stations and others that may be upgraded, CEC through PON 13-607 provided \$999,677 to develop and deploy a commercial mobile hydrogen fueler at stations going offline for the equipment upgrade transition. This action is to cofund development and demonstration of the commercial mobile hydrogen fueler up to \$200,000 from the Clean Fuels Fund (31). This action is also to modify a previous award for Mebtahi's hydrogen station upgrade to add \$300,000 from the Hydrogen Fueling Infrastructure Network Fund (63). Finally, a contract modification is required to add \$50,000 from the Hydrogen Fueling Infrastructure Network Fund (63) to evaluate upgraded hydrogen equipment.

*This item was pulled by staff.*

**5. Other Business**

*In response to questions by Councilman Cacciotti, staff provided updates on the heavy-duty catenary truck project in Carson, the NG police cruiser RFP, and the commercial lawn and garden loaner program. All of the projects are in various stages of progress.*

**6. Public Comment Period**

*There was no public comment.*

**Next Meeting: February 20, 2015**

**Attachment**

Attendance

## Attachment A – Attendance

Councilmember Joe Buscaino .....	SCAQMD Governing Board (via VT)
Councilmember Michael Cacciotti.....	SCAQMD Governing Board
Mayor Miguel Pulido .....	SCAQMD Governing Board
Mayor Dennis Yates .....	SCAQMD Governing Board
Mark Abramowitz .....	Board Consultant (Lyou)
Bob Ulloa .....	Board Consultant (Yates)
John Olvera, Principal Deputy District Counsel .....	SCAQMD
Matt Miyasato, STA .....	SCAQMD
Henry Hogo, STA.....	SCAQMD
Fred Minassian, STA.....	SCAQMD
Laki Tisopulos, STA .....	SCAQMD
Randall Pasek, STA.....	SCAQMD
Andrea Polidori, STA.....	SCAQMD
Dean Saito, STA.....	SCAQMD
Mark Coleman, STA .....	SCAQMD
Drue Hargis, STA.....	SCAQMD
Lisa Mirisola, STA .....	SCAQMD
Adewale Oshinuga, STA.....	SCAQMD
Naveen Berry, PRDAS.....	SCAQMD
Olga Pikelnaya, PRDAS.....	SCAQMD
Robert Paud, IM .....	SCAQMD
Isabel Aguilar, STA.....	SCAQMD
Pat Krayser, STA.....	SCAQMD
Danielle Robinson .....	ARB
Susan Stark .....	Tesoro