

BOARD MEETING DATE: November 3, 2017

AGENDA NO. 27

REPORT: Technology Committee

SYNOPSIS: The Technology Committee held a meeting on Friday, October 20, 2017. The following is a summary of the meeting.

RECOMMENDED ACTION:  
Receive and file.

Sheila Kuehl, Vice Chair  
Technology Committee

MMM:pmk

---

### **Committee Members**

Present: Supervisor Sheila Kuehl/Vice Chair, Mayor Pro Tem Larry McCallon, Council Member Judith Mitchell and Council Member Dwight Robinson

Absent: Council Member Joe Buscaino/Chair, and Supervisor Janice Rutherford

### **Call to Order**

Vice Chair Kuehl called the meeting to order at 12:08 p.m.

### **ACTION ITEMS:**

#### **1. Execute Contracts for FY 2016-17 “Year 19” Carl Moyer Program, SOON Provision and AB 134 Carl Moyer Funding, and Transfer Funds for Carl Moyer Program and Voucher Incentive Program**

In July 2017, Program Announcements for the “Year 19” Carl Moyer Program and SOON Provision closed. These actions are to execute contracts for the “Year 19” Carl Moyer Program and SOON Provision in an amount not to exceed \$27,379,771, comprised of \$23,937,451 from SB 1107 Fund (32), \$3,251,080 from AB 923 Fund (80) and \$191,240 in accrued interest from Carl Moyer Program Fund (32). These actions are also to execute contracts for the Carl Moyer Program and SOON Provision in an amount not to exceed \$51,573,116 with funds to be allocated as approved under Assembly Bill 134 and transfer up to \$51,573,116 as a temporary loan from AB 923 Fund (80) into Carl Moyer Program Fund (32) until receipt of CARB revenues. The Carl Moyer and SOON Provision funds will be used for on- and off-road and marine projects. Finally, this action is to transfer \$2 million from Carl Moyer Program AB 923 Fund (80) to Voucher Incentive Program Fund (59) to continue funding truck replacement projects on a first-come, first-served basis.

*Mayor Pro Tem McCallon asked if the Environmental Justice (EJ) areas for the Carl Moyer Program are the same areas designated by the state. Staff responded that for the Carl Moyer Program, the state relies on the individual air districts to establish their own criteria for determining EJ areas. There is a lot of overlap in the South Coast region and the areas are mostly aligned. In other air districts, there is a lot of disparity between the state designated areas and EJ areas those districts designated through the Carl Moyer Program.*

*Council Member Mitchell asked if any of the funds will be used for the 0.02 g/bhp-hr low NOx engines and if the timing will work knowing that the 0.02 g/bhp-hr low NOx engine (12 L) is not yet commercially available. Staff responded the majority of on-road projects will be using the 0.02 g/bhp-hr low NOx engines. Staff confirmed the timing will work since the SCAQMD allows 18 months following contract execution to put the equipment into service, and the Carl Moyer Program allows 2 years to obligate the funds through contract executions and 4 years to liquidate the funds.*

*Council Member Mitchell asked what steps we take to monitor the funds after they are awarded. Staff explained the projects are monitored through contracts where the equipment/fleet owner is required to submit quarterly reports until the new equipment is delivered and placed into service, and then annual reports thereafter for the life of the contract. Staff also explained that if projects fall through, staff will return to the Committee to reallocate the funds to different projects.*

*Council Member Robinson asked if we know when the 0.02 g/bhp-hr low NOx engine (12L) will be commercially available. Staff responded that Cummins Westport is on track to certify the engine by end of this year. There are 2 different models that Freightliner will commercialize with this engine, a day cab and sleeper cab. The day cab will be commercialized first, by the spring of 2018. Then, in the summer or fall, Freightliner plans to commercialize the sleeper cab. Council Member Robinson asked if this applies nationally or just for California. Staff will check with Freightliner to see if this applies to national deployment.*

*Council Member Robinson asked how the \$30,000/ton cost-effectiveness is calculated. Staff explained for heavy-duty trucks, the project life is 5 years, and the cost effectiveness is based on the grant money awarded by the Carl Moyer Program. If the project receives any cofunding, these funds are not used in the calculation of a project's cost effectiveness.*

*Lauren Nevitt, Environmental Affairs Manager at SoCalGas, commented in support of deploying additional 0.02 g/bhp-hr near-zero emission trucks in alignment with the AQMP.*

Moved by Mitchell; seconded by Robinson; unanimously approved.

## **2. Amend Contract for Tier 4 Passenger Locomotives**

Under the “Year 16” Carl Moyer Program Announcement released on March 7, 2014, the Southern California Regional Rail Authority (SCRRA) submitted a proposal requesting \$58.85 million to cofund the replacement of 17 and the purchase of 3 new Tier 4 locomotives. On September 4, 2015, the Board awarded \$22.85 million to SCRRA from the Carl Moyer Program AB 923 Fund (80), with a commitment to consider the remaining \$36 million over four phases. The first addition of \$9 million was approved by the Board on December 2, 2016. The SCAQMD’s cost-share of this \$129 million project is only for the replacement component of the project. This action is to amend SCRRA’s contract, adding an additional \$9 million for a revised total of \$40.85 million from the Carl Moyer Program AB 923 Fund (80). The remaining \$18 million requested by SCRRA will be considered over two phases in future Board requests.

*Mayor Pro Tem McCallon disclosed for the record that he serves as a Member of the Board of Directors for the Southern California Regional Rail Authority.*

*Council Member Mitchell asked if all forty locomotives will be Tier 4. Staff confirmed that all forty locomotives will be Tier 4. Council Member Robinson asked if there were any design issues during the development of the Tier 4 locomotives or any compliance issues with the Federal Railroad Administration. Mayor Pro Tem McCallon responded that the issues have been resolved.*

*Supervisor Kuehl asked if there are any concerns with co-mingling of funds and whether our funds are contingent upon the receipt of other funds. Staff responded that our funding and involvement is contingent upon receiving cost-share funds from Caltrans and Metrolink. SCAQMD’s funds will be used for the replacement of eleven of the twenty locomotives, and the rest would be funded by Caltrans and Metrolink.*

Moved by Mitchell; seconded by Robinson; unanimously approved.

## **3. Amend Contract for Replacement of Diesel School Buses with Electric Buses**

The Board previously awarded contracts to replace three diesel school buses with electric buses in the amount of \$825,000, consisting of \$156,000 using U.S. EPA Diesel Emissions Reduction Act (DERA) funds recognized in the Lower-Emission School Bus Replacement & Retrofit Program Fund (33) and \$669,000 from the Lower-Emission School Bus Program. The Colton Joint Unified School District (CJUSD) has successfully completed replacement of two buses and expressed interest in cofunding one additional bus replacement. In June 2017, the Los Angeles Unified School District (LAUSD) informed staff they would be unable to cost-share their replacement bus using FY 2017-18 budget funds, but they are still committed to electric school bus replacements. To meet the U.S. EPA deadline, staff is proposing to reallocate the funds originally awarded to LAUSD to CJUSD. This

action is to amend a contract with CJUSD to replace a total of three diesel school buses with electric buses, adding \$275,000 to the previous \$550,000 award for a total of \$825,000 from the Lower-Emission School Bus Replacement & Retrofit Program Fund (33).

*Council Member Mitchell asked about the cost of an electric school bus and whether staff expects the cost to come down. Staff responded that the cost of an electric school bus for a demonstration project ranges between \$370,000 and \$400,000 and the cost is expected to come down in the future as the technology is adopted in larger numbers.*

*Mayor Pro Tem McCallon asked about the warranty of the battery packs. Staff responded that the batteries typically last for 10 years, but could be longer for electric school buses because of limited usage.*

*Supervisor Kuehl inquired about the cost-share provided by the school district and the reason why Los Angeles Unified School District (LAUSD) dropped out. Staff responded that expected cost-share ranged from \$50,000 to \$100,000 per bus and that LAUSD did not have the cost-share in their current budget. Staff is working with LAUSD on other sources of funds to deploy electrical school buses and associated infrastructure.*

Moved by McCallon; seconded by Mitchell; unanimously approved.

**4. Recognize Revenue, Issue Program Announcement for Heavy-Duty Diesel Truck Replacement Projects, Execute Agreement and Reimburse General Fund for Administrative Costs**

In August 2017, U.S. EPA notified SCAQMD that an award had been approved under a Fiscal Year 2017 Diesel Emissions Reduction Act (DERA) solicitation in the amount of \$1,050,000 for the replacement of heavy-duty diesel trucks with CNG trucks as well as the transfer of the replaced diesel trucks to Washington State to replace older dirtier diesel trucks, which would then be scrapped. These actions are to recognize revenue up to \$1,050,000 from the U.S. EPA DERA award into the Advanced Technology, Outreach and Education Fund (17), issue a Program Announcement to solicit proposals for on-road heavy-duty diesel drayage truck replacement projects at a cost not to exceed \$1,000,000, and execute an agreement with the Puget Sound Clean Air Agency to implement the replacement projects in Washington State at a total cost not to exceed \$25,000 from the Advanced Technology, Outreach and Education Fund (17). This action is to also reimburse the General Fund for administrative costs up to \$25,000 from the Advanced Technology, Outreach and Education Fund (17).

*Council Member Mitchell asked about the 10 new trucks that will be replacing existing diesel trucks in the South Coast Air Basin (SCAB) and whether there is any potential for further implementation of the replacement program elsewhere. Staff responded that new trucks for SCAB will be powered by near-zero (0.02g/bhp-hr) natural gas engines, and if this pilot program proves to be viable, public funds may be directed toward similar programs in other areas such as the Ports.*

*Council Member Robinson strongly supported the proposal, but suggested that market price for the 2012 or newer trucks may already be \$30,000 and the replacement project may be more viable if the used truck price is lowered. He further suggested that staff work with U.S. EPA to potentially send the 1995-2006 diesel trucks to Mexico instead of scrapping. Executive Officer Wayne Nastri agreed and indicated that additional monitoring technology, such as geofencing, may be necessary to ensure that the trucks are not operated within our territory.*

Moved by Robinson; seconded by McCallon; unanimously approved.

#### **5. Amend Contract to Develop and Demonstrate Catenary Zero Emissions Goods Movement System**

In April 2013 the Board awarded a contract to Siemens Industry Inc. to develop and demonstrate a zero emission goods movement system using overhead catenary technology. Unexpected subsurface obstructions on Alameda Street in Carson caused delays and added cost for Siemens to redesign the system, including adding previously unbudgeted safety barriers required by the City of Carson around above-ground foundations. This action is to amend the contract with Siemens to cofund safety barriers, adding additional funds not to exceed \$430,000 from the Clean Fuels Fund (31).

*Supervisor Kuehl disclosed for the record that she serves as a Board Member of the Los Angeles County Metropolitan Transportation Authority.*

*Council Member Mitchell inquired about the fate of the catenary system upon completion of the demonstration period. Staff responded that after the data are collected and analyzed, the funding partners and interested state agencies will convene to determine the next steps, e.g., expand the system to another phase, continue operating the system to get more data, mothball the system until a later date, or remove the system.*

*Supervisor Kuehl expressed concern about complete removal of the equipment, considering the level of funding, and what potential conclusions can be reached upon completion. Staff explained the need for a deliberate process to review the data gathered, including a business plan to be developed by Siemens on extending the system, as well as evaluation of the need for on-board batteries, battery cost projects, weight considerations, potential options for Direct Current Fast Chargers,*

*and overall cost comparisons. Staff also informed the committee that the existing contract includes a task for decommissioning the system if no other use is determined.*

Moved by Robinson; seconded by Mitchell; unanimously approved.

**WRITTEN REPORT:**

**6. Clean Fuels Program Draft 2018 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

*Council Member Robinson wanted to ensure that second or third use of vehicle batteries, as well as recycling of lithium ion batteries, is included in the 2018 Clean Fuels Fund Plan, which was supported by Supervisor Kuehl. He further recommended evaluating this issue with OEMs, microgrids, and other groups such as the Electric Power Research Institute. Council Member Robinson also suggested that staff consider potential funds for upgrading natural gas refueling stations, especially those with reliability issues.*

**OTHER MATTERS:**

**7. Other Business:**

There was no other business.

**8. Public Comment Period:**

There were no public comments.

**9. Next Meeting Date**

The next regular Technology Committee meeting is scheduled for Friday, November 17, 2017 at noon.

**Adjournment**

The meeting adjourned at 1:27 p.m.

**Attachment**

Attendance Record

## ATTACHMENT

### **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT TECHNOLOGY COMMITTEE MEETING Attendance – October 17, 2017**

|                                     |                                |
|-------------------------------------|--------------------------------|
| Supervisor Sheila Kuehl .....       | SCAQMD Board Member            |
| Mayor Pro Tem Larry McCallon.....   | SCAQMD Board Member            |
| Council Member Judith Mitchell..... | SCAQMD Board Member            |
| Council Member Dwight Robinson..... | SCAQMD Board Member            |
| <br>                                |                                |
| Mark Abramowitz .....               | Board Consultant (Lyou)        |
| David Czamanske .....               | Board Consultant (Cacciotti)   |
| Diane Moss .....                    | Board Consultant (Kuehl)       |
| Andrew Silva .....                  | Board Consultant (Rutherford)  |
| <br>                                |                                |
| Drew Delaney .....                  | Associates Environmental       |
| Jon Leonard .....                   | GNA                            |
| Jason Lewis .....                   | SoCalGas                       |
| Timothy Lippman .....               | Field Deputy, Supervisor Kuehl |
| Lauren Nevitt.....                  | SoCalGas                       |
| Anne Louise Rice .....              | MetroLink                      |
| Susan Stark .....                   | Andeavor                       |
| <br>                                |                                |
| Alfonso Baez .....                  | SCAQMD Staff                   |
| Naveen Berry.....                   | SCAQMD Staff                   |
| Patrick Chandler .....              | SCAQMD Staff                   |
| Jennifer De La Loza .....           | SCAQMD Staff                   |
| Laura Garrett .....                 | SCAQMD Staff                   |
| Seungbum Ha .....                   | SCAQMD Staff                   |
| Drue Hargis .....                   | SCAQMD Staff                   |
| Joseph Impullitti .....             | SCAQMD Staff                   |
| Sujata Jain.....                    | SCAQMD Staff                   |
| Pat Krayser .....                   | SCAQMD Staff                   |
| Joseph Lopat .....                  | SCAQMD Staff                   |
| Matt Miyasato.....                  | SCAQMD Staff                   |
| Ron Moskowitz .....                 | SCAQMD Staff                   |
| Wayne Nastri .....                  | SCAQMD Staff                   |
| Mike O’Kelly.....                   | SCAQMD Staff                   |
| Adewale Oshinuga.....               | SCAQMD Staff                   |
| Walter Shen .....                   | SCAQMD Staff                   |
| Veera Tyagi .....                   | SCAQMD Staff                   |
| Donna Vernon .....                  | SCAQMD Staff                   |
| Mei Wang .....                      | SCAQMD Staff                   |
| Vicki White .....                   | SCAQMD Staff                   |
| Jill Whynot .....                   | SCAQMD Staff                   |