



**South Coast
Air Quality Management District**
21865 Copley Drive, Diamond Bar, CA 91765
(909) 396-2000, www.aqmd.gov

TECHNOLOGY COMMITTEE MEETING

Committee Members

Council Member Joe Buscaino, Chair
Mayor Larry McCallon
Mayor Pro Tem Judith Mitchell
Council Member Dwight Robinson
Supervisor Janice Rutherford
Supervisor Hilda L. Solis

**June 15, 2018 ♦ 12:00 p.m. ♦ Conference Room CC8
21865 Copley Drive, Diamond Bar, CA 91765**

TELECONFERENCE LOCATIONS

**638 S. Beacon Street
Room 552
San Pedro, CA 90731**

**8575 Haven Avenue
Suite 110
Rancho Cucamonga, CA 91730**

**Hall of Administration
500 W. Temple Street
Room 493A
Los Angeles, CA 90012**

(The public may participate at any location listed above.)

Call-in for listening purposes only is available by dialing:

Toll Free: 866-244-8528

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<http://www.aqmd.gov/home/library/webcasts>

AGENDA

CALL TO ORDER

ACTION ITEMS – Items 1 through 3

JULY BOARD AGENDA ITEMS

- 1. Execute and Amend Contracts for Technical Assistance for Advanced, Low and Zero Emission Mobile and Stationary Source Technologies and Implementation of Incentive Programs (*Motion Requested*)**

On February 2, 2018, the Board approved the release of RFQ #Q2018-12 to solicit proposals to provide technical assistance, implementation and outreach support for advanced, low and zero emissions technologies for

Fred Minassian
Assistant
Deputy
Executive
Officer

the Clean Fuels Program and various incentive funding programs. Sixteen proposals were received in response to the solicitation. These actions are to execute or amend contracts with 11 technical experts to provide technical assistance and outreach support in an amount not to exceed \$2,810,000, comprised of \$810,000 from the Clean Fuels Program Fund (31), \$450,000 from the Carl Moyer Program AB 923 Fund (80), \$375,000 from the Community Air Protection AB 134 Fund (77) and \$1,175,000 from the HEROS II Special Revenue Fund (56). Funding from the Carl Moyer AB 923, AB 134 and HEROS II special revenue funds will be from the administrative portion of those funds.

2. Recognize Revenue from Participating Members of California Natural Gas Vehicle Partnership, Transfer Funds for SCAQMD's Membership, and Approve Budget and Expenditures for Activities and Projects during FYs 2018-19 and 2019-20 (*Motion Requested*)

Phil Barroca
Program
Supervisor

The Board established the California Natural Gas Vehicle Partnership (CNGVP) to promote greater deployment of natural gas vehicles in California. To fund program administration, activities and projects, and achieve the goals of the CNGVP, the Voting Members of the Steering Committee pay dues for a two-year membership while Associate Members participate through in-kind contributions. These actions are to: 1) recognize revenue from participating and future CNGVP Members; 2) transfer \$25,000 from the Clean Fuels Program Fund (31) into the Natural Gas Vehicle Partnership Fund (40) for SCAQMD's two-year membership for FYs 2018-19 and 2019-20; 3) approve the FYs 2018-19 and 2019-20 CNGVP Budget; and 4) authorize the Executive Officer to approve individual expenditures, as approved by the CNGVP, for FYs 2018-19 and 2019-20 up to \$75,000 but not to exceed \$225,000 for each fiscal year.

3. Recognize and Transfer Revenue and Execute Contract to Develop and Demonstrate Zero Emission Trucks and EV Infrastructure (*Motion Requested*)

Joseph
Impullitti
Program
Supervisor

SCAQMD fosters development and demonstration of zero emission goods movement technologies. Daimler Trucks North America LLC (DTNA) proposes to develop 20 heavy-duty electric trucks with EV infrastructure that includes energy storage systems to demonstrate the trucks in real-world commercial fleet operations in and around environmental justice communities. These actions are to recognize revenue up to \$2,000,000 from the San Pedro Bay Ports and transfer up to \$4,440,000 from the State Emissions Mitigation Fund (39) and \$11,230,072 from the Clean Fuels Program Fund (31) into the Advanced Technology Goods Movement Fund (61). Of the \$11,230,072, up to \$2,000,000 is for a temporary loan pending receipt of the Ports' cofunding and \$9,230,072 is for SCAQMD's cost-share for the project. Staff is actively seeking additional cofunding; if realized, SCAQMD's cost-share may decrease, subject to Board consideration. This action is to also execute a contract with DTNA to develop and demonstrate 20

heavy-duty electric trucks and EV infrastructure in an amount not to exceed \$15,670,072 from the Advanced Technology Goods Movement Fund (61).

OTHER MATTERS

- 4. Other Business** – *Any member of the Committee, or its staff, on his or her own initiative or in response to questions posed by the public, may ask a question for clarification, may make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter, or may take action to direct staff to place a matter of business on a future agenda. (Gov't. Code Section 54954.2)*
- 5. Public Comment Period**
Members of the public may address this body concerning any agenda item before or during consideration of that item (Gov't. Code Section 54954.3(a)). All agendas for regular meetings are posted at District Headquarters, 21865 Copley Drive, Diamond Bar, California, at least 72 hours in advance of a regular meeting. At the end of the regular meeting agenda, an opportunity is also provided for the public to speak on any subject within the Committee's authority. Speakers may be limited to three (3) minutes each.
- 6. Next Meeting Date** – Friday, July 20, 2018 at 12:00 pm

ADJOURNMENT

Americans with Disabilities Act

The agenda and documents in the agenda packet will be made available, upon request, in appropriate alternative formats to assist persons with a disability (Gov't. Code Section 54954.2(a)). Disability-related accommodations will also be made available to allow participation in the Technology Committee meeting. Any accommodations must be requested as soon as practicable. Requests will be accommodated to the extent feasible. Please contact Pat Krayser at 909.396.3248 from 7:30 a.m. to 6:00 p.m., Tuesday through Friday, or send the request to pkrayser@aqmd.gov.

Document Availability

All documents (i) constituting non-exempt public records, (ii) relating to an item on an agenda for a regular meeting, and (iii) having been distributed to at least a majority of the Committee after the agenda is posted, are available prior to the meeting for public review at the South Coast Air Quality Management District, Public Information Center, 21865 Copley Drive, Diamond Bar, CA 91765.

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DRAFT
Technology Committee Agenda #1

BOARD MEETING DATE: July 6, 2018

AGENDA NO.

PROPOSAL: Execute and Amend Contracts for Technical Assistance for Advanced, Low and Zero Emissions Mobile and Stationary Source Technologies and Implementation of Incentive Programs

SYNOPSIS: On February 2, 2018, the Board approved the release of RFQ #Q2018-12 to solicit proposals to provide technical assistance, implementation and outreach support for advanced, low and zero emissions technologies for the Clean Fuels Program and various incentive funding programs. Sixteen proposals were received in response to the solicitation. These actions are to execute or amend contracts with 11 technical experts to provide technical assistance and outreach support in an amount not to exceed \$2,810,000, comprised of \$810,000 from the Clean Fuels Program Fund (31), \$450,000 from the Carl Moyer Program AB 923 Fund (80), \$375,000 from the Community Air Protection AB 134 Fund (77) and \$1,175,000 from the HEROS II Special Revenue Fund (56). Funding from the Carl Moyer AB 923, AB 134 and HEROS II special revenue funds will be from the administrative portion of those funds.

COMMITTEE: Technology, June 15, 2018; Recommended for Approval

RECOMMENDED ACTIONS:

1. Authorize the Chairman to execute the following contracts in an amount not to exceed \$810,000 from the Clean Fuels Program Fund (31):
 - a) AEE Solutions LLC for technical assistance with heavy-duty vehicle emissions testing, analyses and engines development and applications in an amount not to exceed \$100,000;
 - b) CALSTART, Inc., for deployment and demonstration of infrastructure and mobile source applications in an amount not to exceed \$150,000;
 - c) Clean Fuel Connection, Inc., (CFCI) for technical assistance with alternative fuels, electric vehicles, charging and fueling infrastructure and renewable energy in an amount not to exceed \$100,000;
 - d) Eastern Research Group for technical assistance with heavy-duty vehicle emissions testing, analyses and engines development and applications in an amount not to exceed \$50,000;

- e) Gladstein, Neandross & Associates LLC (GNA) for technical assistance with alternative fuels and fueling infrastructure, emissions analysis and on-road sources in an amount not to exceed \$200,000;
 - f) Hydrogen Ventures for assistance with hydrogen infrastructure projects in an amount not to exceed \$50,000;
 - g) TechCompass for assistance with evaluation of combustion engines and alternative fuel technologies in an amount not to exceed \$10,000; and
 - h) University of California Riverside (UCR) for technical assistance with heavy-duty vehicle emissions testing, analyses and engines development and applications in an amount not to exceed \$150,000.
2. Authorize the Chairman to execute the following contracts for proposal evaluations and implementation of the Carl Moyer Program (including the School Bus Program) in an amount not to exceed \$450,000 from the administrative portion of the Carl Moyer Program AB 923 Fund (80):
- a) CALSTART, Inc., in an amount not to exceed \$150,000; and
 - b) CFCI in an amount not to exceed \$300,000.
3. Authorize the Chairman to execute the following contracts for outreach support, proposal evaluations, grant management systems and implementation of the Carl Moyer-Community Air Protection Program for a total of \$375,000 from the administrative portion of the Community Air Protection AB 134 Fund (77):
- a) CFCI in an amount not to exceed \$175,000;
 - b) GNA in an amount not to exceed \$100,000;
 - c) Liberty Hill Foundation in an amount not to exceed \$25,000; and
 - d) Sonoma Technology, Inc., in an amount not to exceed \$75,000.
4. Authorize the Chairman to execute or amend the following contracts for technical assistance, implementation and outreach support of the Enhanced Fleet Modernization Program in an amount not to exceed \$1,175,000 from the administrative portion of the HEROS II Special Revenue Fund (56):
- a) A contract amendment with CFCI in an amount not to exceed \$500,000;
 - b) A contract amendment with the Foundation for California Community Colleges (FCCC) in an amount not to exceed \$650,000; and
 - c) A contract with Liberty Hill Foundation in an amount not to exceed \$25,000.

Wayne Nastri
Executive Officer

MMM:FM

Background

The AQMP is the comprehensive regional plan for attaining federal air quality standards in the South Coast Air Basin. In addition to full implementation of current technologies and control methods, there is a need to further develop and promote technological breakthroughs. Air quality projections indicate that the federal standards for PM_{2.5} and ozone are not expected to be met without aggressive implementation of commercial technologies and accelerated development of new technologies.

The Technology Advancement Office (TAO) administers two programs to accomplish these goals. The Clean Fuels Program supports projects to research, develop, demonstrate and deploy technologies to accelerate commercialization of clean, new technologies. The Carl Moyer, Proposition 1B-Goods Movement, Lower-Emission School Bus, Enhanced Fleet Modernization Programs and other similar programs provide incentive funding to end-users to implement the cleanest available technologies for various light-duty vehicles, and heavy-duty on- and off-road applications. Due to constant and rapid changes in technologies and the sheer breadth of the potential projects, staff occasionally requires input from experts and in-the-field practitioners to aid in selecting and establishing projects for the Clean Fuels Program and to implement various incentive programs.

On February 2, 2018, the Board approved RFQ #Q2018-12 to solicit proposals for technical assistance for the Clean Fuels Program and implementation of various incentive funding programs. The RFQ solicited statements of qualifications from individuals and organizations potentially capable of providing technical assistance in a variety of areas to support staff activities. The RFQ sought companies or individuals to provide assistance in assessment of zero emissions and goods movement technologies; technical assistance for feasibility studies of stationary and mobile emissions control technologies; emissions assessment of new alternative fuel technologies; evaluation of innovative emissions control systems; assessment of economic, regulatory and technical barriers to the commercialization of clean fuels and advanced technologies; and to implement various incentive programs.

Outreach

In accordance with SCAQMD's Procurement Policy and Procedure, a public notice advertising the RFQ and inviting bids was published in the Los Angeles Times, the Orange County Register, the San Bernardino Sun, and Riverside County's Press Enterprise newspapers to leverage the most cost-effective method of outreach to the South Coast Basin.

Additionally, potential bidders may have been notified utilizing SCAQMD's own electronic listing of certified minority vendors. Notice of the RFQ was emailed to the Black and Latino Legislative Caucuses and various minority chambers of commerce

and business associations, and placed on the Internet at SCAQMD's website (<http://www.aqmd.gov>).

Proposal Evaluation

Sixteen proposals were received in response to RFQ #Q2018-12. The proposals were evaluated and scored by a three-member panel in accordance with established SCAQMD guidelines. The panel consisted of one Assistant Deputy Executive Officer, one Technology Demonstration Manager and one Technology Implementation Manager. The panel breakdown was as follows: two males and one female; two Caucasians and one Asian Pacific Islander. The panel scores are shown in Table 1 of the attachment. Based on these scores and current needs, staff is recommending funding levels for each of the proposers as shown in Table 2 of the attachment. The technical expertise of five proposers - Fossil Energy Research Corporation, Oji Environmental Services, Energy Solutions, Norton Engineering, Energetics, Inc., - did not match the specific objectives and needs of the SCAQMD's demonstration and implementation programs at this time and are therefore not recommended for awards.

Proposal

This action is to execute level-of-effort contracts as follows:

AEE Solutions LLC will provide technical assistance with heavy-duty vehicles emissions testing, analyses and engine development and applications in an amount not to exceed \$100,000 from the Clean Fuels Program Fund (31). The team at AEE Solutions LLC has professional experience and proven expertise in the areas of alternative fuels, low and zero emissions technologies, emissions controls, federal policies and state regulations.

CALSTART, Inc., will provide assistance with deployment and demonstration of infrastructure and mobile source applications in an amount not to exceed \$300,000, comprised of \$150,000 from the Clean Fuels Program Fund (31) and \$150,000 from the Carl Moyer Program AB 923 Fund (80). The team at CALSTART has professional experience and expertise in the areas of infrastructure development, zero emission buses, near-zero emission medium- and heavy-duty vehicles and strategies for zero and near-zero market expansion. They have been assisting CARB in the implementation of HVIP during the past several years.

Clean Fuel Connection, Inc., (CFCI) will provide technical assistance with alternative fuels, electric vehicles, charging and fueling infrastructure and renewable energy as well as technical assistance on continued implementation and reporting for the Carl Moyer Program, including the School Bus and the Carl Moyer-Community Air Protection Programs, and the Enhanced Fleet Modernization Program (EFMP) in an amount not to exceed \$1,075,000, comprised of \$100,000 from the Clean Fuels Program Fund (31), \$300,000 from the Carl Moyer Program AB 923 Fund (80), \$175,000 from the

Community Air Protection AB 134 Fund (77) and \$500,000 from the HEROS II Special Revenue Fund (56). Ms. Enid Joffe (principal) has more than 15 years of experience with low and zero emissions technologies, electric vehicles and charging infrastructure and renewable energy.

Eastern Research Group will provide technical assistance with vehicles emissions testing, analyses and engine development and applications in an amount not to exceed \$50,000 from the Clean Fuels Program Fund (31). The group at Eastern Research Group has experience and capabilities in conducting both dynamometer and in-use emissions measurements.

Foundation for California Community Colleges (FCCC) has successfully provided assistance for the implementation of the EFMP program by providing case management and outreach support since its inception. FCCC will continue to provide assistance for the implementation of this program in an amount not to exceed \$650,000 from the HEROS II Special Revenue Fund (56).

Gladstein, Neandross & Associates LLC (GNA) will provide technical expertise with alternative fuels and fueling infrastructure, emissions analysis, on-road sources and outreach activities in an amount not to exceed \$300,000, comprised of \$200,000 from the Clean Fuels Program Fund (31) and \$100,000 from the Community Air Protection AB 134 Fund (77). GNA has partnered with energy, transit, waste management and goods movement companies to develop projects such as the use of LNG in cargo handling equipment at the Ports of Los Angeles and Long Beach, evaluation of the feasibility of utilizing LNG in the Ports' yard equipment and the development of strategies to reduce emissions from construction and operations of the proposed LNG import terminal.

Hydrogen Ventures will provide assistance with hydrogen infrastructure and related projects in an amount not to exceed \$50,000 from the Clean Fuels Program Fund (31). The team at Hydrogen Ventures has conducted several studies on viability of hydrogen technology and fueling.

Liberty Hill Foundation, a nonprofit organization, will provide assistance with SCAQMD outreach efforts in disadvantaged and low-income communities for the implementation of incentive funding programs in those areas in an amount not to exceed \$50,000, comprised of \$25,000 from the Community Air Protection AB 134 Fund (77) and \$25,000 from the HEROS II Special Revenue Fund (56). Liberty Hill Foundation has considerable experience in identifying and reaching out to disadvantage communities for various types of projects.

Sonoma Technology, Inc., will provide assistance with the identification, evaluation and development of grant management systems, including web-based and mobile

applications as appropriate, for program management and reporting for the Carl Moyer Program in an amount not to exceed \$75,000 from the Community Air Protection AB 134 Fund (77). Sonoma Technology has an experienced staff with expertise in implementation of web-based and mobile application systems.

TechCompass will provide assistance with evaluation of combustion engines and alternative fuel technologies in an amount not to exceed \$10,000 from the Clean Fuels Program Fund (31). Mr. Andy Abele (principal) has more than 20 years of experience with research and development in combustion technology projects.

University of California Riverside (UCR) will provide technical assistance with heavy-duty vehicle emissions testing, analyses and engine development and applications in an amount not to exceed \$150,000 from the Clean Fuels Program Fund (31). The team at the UCR has professional experience and proven expertise in the areas of alternative fuels, low and zero emissions technologies, emissions testing, and federal policies and state regulations.

Benefits to SCAQMD

The proposed awards will support the implementation of Clean Fuels, Carl Moyer and EFMP Programs. In addition, outside expertise will provide an effective means of evaluating new technologies and assessing emissions reductions.

Resource Impacts

Total amount of awards will not exceed \$2,810,000, comprised of \$810,000 from the Clean Fuels Program Fund (31), \$450,000 from the Carl Moyer Program AB 923 Fund (80), \$375,000 from the Community Air Protection AB 134 Fund (77) and \$1,175,000 from the HEROS II Special Revenue Fund (56).

Sufficient funds are available from the Clean Fuels Program Fund, established as a special revenue fund resulting from the state-mandated Clean Fuels Program to cover the proposed \$540,000 for outside technical assistance. The Clean Fuels Program, under Health and Safety Code Sections 40448.5 and 40512 and Vehicle Code Section 9250.11, establishes mechanisms to collect revenues from mobile sources to support projects to increase the utilization of clean fuels, including the development of the necessary advanced enabling technologies. Funds collected from motor vehicles are restricted, by statute, to be used for projects and program activities related to mobile sources that support the objectives of the Clean Fuels Program.

Funding from the Carl Moyer, the Community Air Protection AB 134, and the EFMP funds will be from the administrative portion of those funds.

Attachments

Table 1 – Average Scores for Proposers

Table 2 – Proposed Awards

Table 1. Average Scores for Proposers

Proposer	Technical Points	Labor Rates	Additional Points*	Total Points
AEE Solutions LLC	59	30	0	89
CALSTART, Inc.	60	28	5	93
CFCI	57	28	15	100
Eastern Research Group	58	28	0	86
FCCC	58	30	0	88
GNA	68	20	15	103
Hydrogen Ventures	63	20	15	98
Liberty Hill Foundation	56	25	7	88
Sonoma Technology, Inc	56	25	12	93
TechCompass	58	28	15	101
UCR	66	25	0	91

* The additional points were 10 points each for small business and DVBE, 7 points for use of DVBE subcontractors, 5 points each for low emission vehicle business and local business, and 2 points each for off-peak hours delivery business and most favored customer. The maximum additional points could not exceed 15 points.

Table 2. Proposed Awards

Proposer	Clean Fuels Program Fund (31)	Carl Moyer Program (incl. School Bus & VIP) AB 923 Fund (80)	Community Air Protection AB 134 Fund (77)	HEROS II Special Revenue Fund (56)	Total
AEE Solutions LLC	\$100,000				\$100,000
CALSTART, Inc.	\$150,000	\$150,000			\$300,000
CFCI	\$100,000	\$300,000	\$175,000	\$500,000	\$1,075,000
Eastern Research Group	\$50,000				\$50,000
FCCC				\$650,000	\$650,000
GNA	\$200,000		\$100,000		\$300,000
Hydrogen Ventures	\$50,000				\$50,000
Liberty Hill Foundation			\$25,000	\$25,000	\$50,000
Sonoma Technology, Inc.			\$75,000		\$75,000
TechCompass	\$10,000				\$10,000
UCR	\$150,000				\$150,000
Total	\$810,000	\$450,000	\$375,000	\$1,175,000	\$2,810,000

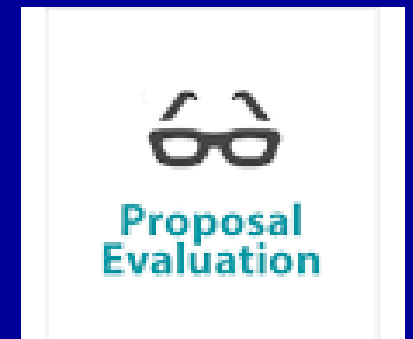
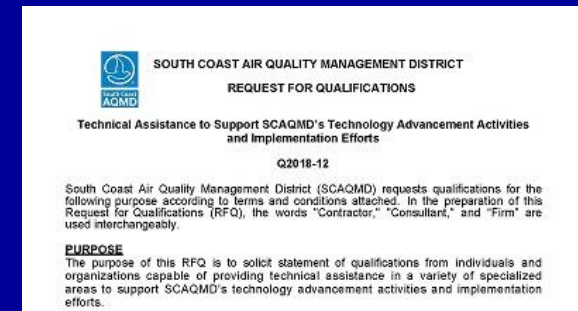
Agenda Item #1

Fred Minassian

Execute and Amend Contracts for Technical
Assistance for Advanced, Low and Zero
Emissions Mobile and Stationary Source
Technologies and Implementation
of Incentive Programs

Background

- Technical expertise is required for Clean Fuels Program and various incentive programs
- Released RFQ #Q2018-12 on February 2, 2018
- 16 proposals received
- Review Panel:
One ADEO and two senior managers from Science & Technology Advancement



Clean Fuels Program

- Review and assess technologies
- Interface and engage OEMs
- EVs and charging station expertise
- Fuels and life-cycle analyses
- Emissions testing
- Stationary technology analysis



Incentive Funding Programs

- Carl Moyer Program including SOON, VIP and School Bus
 - Develop and evaluate program guidelines
 - Review applications
 - Fleet outreach and assistance
 - Reporting
 - Community outreach
- Enhanced Fleet Modernization Program (EFMP)
 - Case management and evaluation
 - Community outreach



Proposed Awards

Proposer	Clean Fuels Program Fund (31)	Carl Moyer Program (incl. School Bus & VIP) AB 923 Fund (80)	Community Air Protection AB 134 Fund (77)	HEROS II Special Revenue Fund (56)	Total
AEE Solutions LLC	\$100,000				\$100,000
CALSTART, Inc.	\$150,000	\$150,000			\$300,000
Clean Fuel Connection, Inc.	\$100,000	\$300,000	\$175,000	\$500,000	\$1,075,000
Eastern Research Group	\$50,000				\$50,000
Foundation for California Community Colleges				\$650,000	\$650,000
Gladstein, Neandross & Associates LLC	\$200,000		\$100,000		\$300,000

Proposed Awards (cont'd)

Proposer	Clean Fuels Program Fund (31)	Carl Moyer Program (incl. School Bus & VIP) AB 923 Fund (80)	Community Air Protection AB 134 Fund (77)	HEROS II Special Revenue Fund (56)	Total
Hydrogen Ventures	\$50,000				\$50,000
Liberty Hill Foundation			\$25,000	\$25,000	\$50,000
Sonoma Technology, Inc.			\$75,000		\$75,000
TechCompass	\$10,000				\$10,000
University of California Riverside	\$150,000				\$150,000
Total (incl. previous slide)	\$810,000	\$450,000	\$375,000	\$1,175,000	\$2,810,000

Recommended Actions

- Eight contracts in an amount not to exceed \$810,000 from the Clean Fuels Program Fund (31):
 - AEE Solutions LLC: \$100,000
 - CALSTART, Inc.: \$150,000
 - Clean Fuel Connection, Inc. \$100,000
 - Eastern Research Group: \$50,000
 - Gladstein, Neandross & Associates LLC: \$200,000
 - Hydrogen Ventures: \$50,000
 - TechCompass: \$10,000
 - University of California Riverside: \$150,000
- Two contracts in an amount not to exceed \$450,000 from the administrative portion of Carl Moyer Program AB 923 Fund (80):
 - CALSTART, Inc.: \$150,000
 - Clean Fuel Connection, Inc.: \$300,000

Recommended Actions (cont'd)

- Four contracts in an amount not to exceed \$375,000 from the administrative portion of the Community Air Protection AB 134 Fund (77):
 - Clean Fuel Connection, Inc.: \$175,000
 - Gladstein, Neandross & Associates LLC: \$100,000
 - Liberty Hill Foundation: \$25,000
 - Sonoma Technology, Inc. \$75,000
- Three contracts in an amount not to exceed \$1,175,000 from the administrative portion of the HEROS II Special Revenue Fund (56):
 - *Clean Fuel Connection, Inc.: \$500,000
 - *Foundation for CA Community Colleges: \$650,000
 - Liberty Hill Foundation: \$25,000

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DRAFT
Technology Committee Agenda #2

BOARD MEETING DATE: July 6, 2018

AGENDA NO.

PROPOSAL: Recognize Revenue from Participating Members of California Natural Gas Vehicle Partnership, Transfer Funds for SCAQMD's Membership, and Approve Budget and Expenditures for Activities and Projects during FYs 2018-19 and 2019-20

SYNOPSIS: The Board established the California Natural Gas Vehicle Partnership (CNGVP) to promote greater deployment of natural gas vehicles in California. To fund program administration, activities and projects, and achieve the goals of the CNGVP, the Voting Members of the Steering Committee pay dues for a two-year membership while Associate Members participate through in-kind contributions. These actions are to: 1) recognize revenue from participating and future CNGVP Members; 2) transfer \$25,000 from the Clean Fuels Program Fund (31) into the Natural Gas Vehicle Partnership Fund (40) for SCAQMD's two-year membership for FYs 2018-19 and 2019-20; 3) approve the FYs 2018-19 and 2019-20 CNGVP Budget; and 4) authorize the Executive Officer to approve individual expenditures, as approved by the CNGVP, for FYs 2018-19 and 2019-20 up to \$75,000 but not to exceed \$225,000 for each fiscal year.

COMMITTEE: Technology, June 15, 2018; Recommended for Approval

RECOMMENDED ACTIONS:

1. Recognize, upon receipt, up to \$170,000 in membership dues over a two-year period from participating and future members of the CNGVP into the Natural Gas Vehicle Partnership Fund (40);
2. Transfer \$25,000 from the Clean Fuels Program Fund (31) into the Natural Gas Vehicle Partnership Fund (40) for SCAQMD's two-year membership for FYs 2018-19 and 2019-20;
3. Approve the CNGVP budget for FYs 2018-19 and 2019-20, as provided in Table 4; and
4. Authorize the Executive Officer to approve expenditures from the Natural Gas Vehicle Partnership Fund (40) for activities and projects selected by the CNGVP designed to meet partnership goals, as described in this letter and Table 4, for

FYs 2018-19 and 2019-20 in budgeted amounts up to \$75,000 for individual expenditures, contingent upon availability of funds, but not to exceed \$225,000 per fiscal year.

Wayne Nasti
Executive Officer

MMM:FM:NB:PMB

Background

In 2002, the Board established the California Natural Gas Vehicle Partnership (CNGVP or the Partnership) to accelerate development of advanced natural gas vehicle technologies, establish a benchmark for lowering emissions from petroleum-based engines, and provide a pathway for transitioning towards fuel cells in the future. The CNGVP is comprised of state and federal air quality agencies, transportation and energy agencies, vehicle and engine manufacturers, fuel providers, transit organizations and refuse haulers.

The Partnership seeks to encourage high-level policymakers from around the nation to share knowledge, plan joint projects and discuss issues such as the role of natural gas to address national energy policies, the potential of natural gas to strengthen national fuel security, and the expansion of engine and vehicle platform development to meet future more stringent engine emissions standards.

Structurally, the Partnership is overseen by a Steering Committee led by a Chair. The Partnership is comprised of Voting Members and Associate Members. All members participate in the activities of the Steering Committee and the working groups created by the Steering Committee. Voting Members make a contribution of \$25,000 for a two-year membership and participate on the Steering Committee and working groups. In addition, private end-users and/or fleet operators may become Voting Members with a minimum contribution of \$10,000. Voting Members make decisions regarding the Partnership's activities and project plans, elections of Chair and Vice-Chair, and budget and expenditures. Each Voting Member has one vote on the Steering Committee. Associate Members do not have membership dues or voting privileges, but participate through in-kind contributions providing valuable assistance in furthering deployment of natural gas vehicles. One environmental organization on behalf of all environmental groups in the Steering Committee will be accepted as a Voting Member without the \$25,000 contribution. The members of the Steering Committee have provided that distinction to CARB.

The Partnership's Steering Committee meets on a periodic basis with high-level representation from each participating member. SCAQMD's representation on the CNGVP includes three Board Members: Mayor Ben Benoit, Dr. Clark E. Parker, Sr., (who has been serving as CNGVP Vice-Chair) and Council Member Dwight Robinson. Routine activities of the Partnership include members and invited guests providing and receiving updates on industry activities, legislative and regulatory activities as well as discussing and planning programs and projects that help promote the Partnership's goals and objectives, which include the use of natural gas as a transportation fuel that can contribute to regional and global air quality issues. An integral part of the Partnership's ability to communicate its message is the CNGVP website (cngvp.org), which is currently maintained under a contract with Gladstein, Neandross & Associates LLC (GNA). The website promotes the activities of the CNGVP and the natural gas vehicle industry in general. The CNGVP also provides sponsorships or cosponsorships for various events, conferences and expositions that advance the use of natural gas as a transportation fuel as well as the development of key documents relative to natural gas vehicles and the role they can play in helping improve air quality.

Over the past two years, individual members of the CNGVP have been active in expanding natural gas refueling infrastructure for California and the rest of the nation, helping to develop near-zero NOx emissions (NZE) heavy-duty natural gas engines that are certified to CARB's most stringent optional low NOx standard of 0.02g NOx/bhp-hr or 90 percent cleaner than the current on-road heavy-duty engine NOx exhaust emissions standard, and advancing the production and deployment of locally produced and consumed renewable natural gas (RNG) that has a significantly lower carbon intensity relative to any fossil-based fuel. In addition, the CNGVP has participated or been involved in the following:

1. Development of a technical white paper exploring the need to deploy zero emissions and NZE heavy-duty vehicle technologies on a wide-scale basis in the U.S., in combination with the use of RNG. The combination can offer an array of environmental and economic benefits, including job creation, improved air quality and a number of environmental waste stream management improvements that will accrue at local levels. The white paper titled "Game Changer – Next Generation Heavy-Duty Natural Gas Engines Fueled by Renewable Natural Gas" (Game Changer) was released on May 3, 2016.
2. Developing communication materials to support and further communicate the key findings of the Game Changer, such as:
 - a. Identifying key facts and metrics into a one page fact sheet,
 - b. Developing a Frequently Asked Question brochure to proactively address the most common questions asked about the Game Changer concept and many points made by NGV industry critics,

- c. Developing a Slide Deck to help industry stakeholders and others communicate the findings,
 - d. Developing Fleet Case Studies that are single page profile pieces that highlight the growing number of progressive fleet operators,
 - e. Developing Infographics for stakeholders for use in their own marketing materials,
 - f. Preparing video scripted for use across a wide range of media platforms and audiences, especially those less aware of the heavy-duty natural gas vehicle industry and RNG,
 - g. Updating the Game Changer website, and
 - h. Adding links on the website to relevant funding programs for the purchase of NZE natural gas vehicles and RNG fueling.
3. Partnering with organizations like the California Natural Gas Vehicle Coalition to conduct a one-day event to bring together stakeholders, policy makers and interested parties at the Ports to provide key findings of the “Game Changer” and to present and discuss opportunities for significant criteria and GHG emissions reductions through widespread and immediate deployment of NZE trucks powered with ultra-low carbon intensity RNG.
 4. Cosponsorships of, and participation at, the 2017 and 2018 Advanced Clean Transportation (ACT) Expo in Long Beach (May 2-5, 2017, and May 1-4, 2018) and the Rethink Methane Symposium in Sacramento (February 21-22, 2017, and February 26-27, 2018).

Proposal

The CNGVP operates on a two-year budget cycle. These actions are to: 1) recognize revenue from participating and future CNGVP Members for FYs 2018-19 and 2019-20; 2) transfer funds from the Clean Fuels Program Fund (31) into the Natural Gas Vehicle Partnership Fund (40) for SCAQMD’s two-year membership for FYs 2018-19 and 2019-20; 3) approve the FYs 2018-19 and 2019-20 CNGVP budget; and 4) authorize the Executive Officer to approve individual expenditures, as approved by the CNGVP for FYs 2018-19 and 2019-20.

During FYs 2016-17 and 2017-18, the CNGVP Steering Committee was comprised of 12 members (Table 1). In April 2018, Westport Innovations, Inc., stated they would no longer be part of the Partnership in deference to Cummins’ participation. Additionally, Kroger Company has not renewed their membership pending further consideration by their sustainability management staff. Table 2 lists the 13 Associate Members consisting of transit districts, public agencies, school districts and environmental organizations as well as the CEC and U.S. EPA.

Table 1. CNGVP Steering Committee Members

Agility Fuel Systems
Clean Energy Fuels
CR&R Inc.*
Cummins Inc.
The Kroger Company*
Sempra Energy Utilities
Trillium CNG
U.S. Department of Energy**
Waste Management, Inc.*
Westport Innovations, Inc.
CARB**
SCAQMD

*Fleet operators/end users (reduced fee)

**Non-paying members

Table 2. CNGVP Associate Members

CEC
City of Los Angeles
Coalition for Clean Air
Colton Unified School District
Foothill Transit
Los Angeles County Metropolitan Transportation Authority
Natural Resources Defense Council
Orange County Transportation Authority
San Joaquin Valley Air Pollution Control District
SunLine Transit Agency
Union of Concerned Scientists
U.S. EPA
University of California Davis

In July 2016, the Board approved the CNGVP's FYs 2016-17 and 2017-18 Budget. In addition to conference sponsorships, the CNGVP Steering Committee approved an upgrade to their website at a cost not to exceed \$6,800 under a contract with GNA. The cost to maintain the website under another contract with GNA was reduced from \$2,500 per month (July 1, 2016, through March 31, 2017) to \$2,000 per month from April 1, 2017, through March 31, 2018. At its last meeting in April 2018, the CNGVP Steering Committee approved a one-year extension of the website maintenance contract with GNA at the current rate of \$2,000 per month through March 31, 2019. Costs for the website upgrades and maintenance were paid from the Natural Gas Vehicle Partnership Fund (Fund 40). Revenues and expenditures for FYs 2016-17 and 2017-18 are summarized in Table 3.

Table 3. CNGVP Fund Revenues and Expenditures

Revenues (July 2016 – June 2018)	\$633,823
Available Funds (as of July 2016)	\$429,494
Membership Dues Received	\$195,000
Interest Earned	\$9,329
Expenditures (July 2016 – June 2018)	(\$223,689)
Website Upgrade and Maintenance (GNA Contract #12308)	(\$68,300)
Special Consultation & Activity Coordination: Game Changer Communications Tools and Materials	(\$60,000)
Port Event Co-Sponsorship	(\$50,000)
Conference Sponsorships: 2017/18: ACT Expo, Rethink Methane	(\$45,000)
Facility and Meeting Support	(\$389)
Available Fund Balance for FYs 2018-19 and 2019-20	\$410,134

The CNGVP Steering Committee two-year membership dues are currently up for renewal. If all current members renew their memberships, the Natural Gas Vehicle Partnership Fund (40) would be replenished with revenues totaling \$170,000 over the next two years. Projected revenues and proposed expenditures for FYs 2018-19 (July 1, 2018, to June 30, 2019) and 2019-20 (July 1, 2019, to June 30, 2020) are outlined in Table 4, which has been reviewed and approved by the CNGVP Steering Committee Members, pending SCAQMD Board consideration.

Table 4. Proposed FYs 2018-19 and 2019-20 CNGVP Budget

Available Funds for FYs 2018-19 and 2019-20	\$410,134
Anticipated Membership Dues	\$170,000
Total Anticipated Available Funds	\$580,134
<u>Proposed Budget Expenditures</u>	(\$311,000)
Website Maintenance ¹	(\$60,000)
Facility and Meeting Support	(\$1,000)
Special Consultation and Activity Coordination	(\$150,000)
Conference/Exhibition Sponsorships	(\$100,000)
Estimated Unallocated Fund Balance	\$269,134

¹ Includes funding amounts approved through March 31, 2019, of \$24,000, projected amounts through June 30, 2020, of \$30,000 (@\$2,000/month for 15 months), plus contingencies.

For FYs 2018-19 and 2019-20, the CNGVP membership will be directing their efforts toward furthering consumer and public awareness of the benefits of RNG and its use as a transportation fuel in heavy-duty vehicle applications that employ engines certified to CARB's optional low NOx exhaust emissions standard of 0.02g NOx/bhp-hr. These engines are used in many Class 7 and 8 heavy-duty vehicles, particularly in the goods movement, transit and refuse collection services. The CNGVP plans to continue efforts to enhance natural gas and RNG refueling infrastructure in California. Furthermore, the CNGVP plans to continue cosponsoring relevant conferences, identifying projects and studies to further the deployment of next-generation natural gas engines, and advancing the local production and use of RNG as a transportation fuel for both on- and off-road mobile sources.

Benefits to SCAQMD

The implementation of this Partnership has brought public and private stakeholders together to assist in the development and deployment of advanced natural gas vehicles and refueling infrastructure expansion. The CNGVP will continue its leadership role to work with original equipment manufacturers, government and the public towards the advancement of natural gas vehicles in the marketplace to further address criteria pollutant emissions as well as greenhouse gases and energy needs. This will, in turn, increase the natural gas role as a low emissions displacement or augmentation to petroleum fuel where economically feasible. These activities are included in the *Technology Advancement Office Clean Fuels Program 2018 Plan Update* under "Infrastructure and Deployment (NG/RNG)" and "Assess and Support Advanced Technologies and Disseminate Information".

Resource Impact

The current fund balance totaling \$410,134 plus anticipated membership fees over the next two years of \$170,000 are sufficient to cover projected CNGVP expenditures, budgeted at \$311,000 for FYs 2018-19 and 2019-20. The SCAQMD's two-year membership for FYs 2018-19 and 2019-20 will not exceed \$25,000 from the Clean Fuels Program Fund (31). There are sufficient funds in the Clean Fuels Fund (31) for this membership fee. The Executive Officer will approve individual expenditures, as approved by the CNGVP, for FYs 2018-19 and 2019-20 up to \$75,000 but not to exceed \$225,000 for each fiscal year.

The Clean Fuels Program Fund (31) was established as a special revenue fund resulting from the state-mandated Clean Fuels Program. The Clean Fuels Program, under Health and Safety Code Sections 40448.5 and 40512 and Vehicle Code Section 9250.11, establishes the mechanism to collect revenues from mobile sources to support projects to increase the utilization of clean fuels, including the development of the necessary advanced enabling technologies. Funds collected from motor vehicles are restricted, by statute, to be used for projects and program activities related to mobile sources that support the objectives of the Clean Fuels Program.

Agenda #2

Phil Barroca

Recognize Revenue from
Participating Members of CNGVP,
Transfer Funds for SCAQMD Membership,
Approve Budget and Expenditures for
FYs 2018-19 and 2019-20

Background

- Creation of CNGVP in 2002
- Mission
 - accelerate development of advanced NGV technologies
 - establish a lower emission threshold for petroleum-based engines
 - pathway to H2 fuel cell use
- Steering Committee
 - Elected Chair & Vice-Chair
 - Voting Members - pay dues (CARB and DOE excluded)
 - Associate Members - provide in-kind contributions

Background (cont'd)

CNGVP Steering Committee

State and Federal Agencies

Transportation and
Energy Agencies

Vehicle and
Engine Manufacturers

Fuel Providers

Service Providers –
Transit Agencies/Refuse Haulers

Voting Members



Recent Activities

FYs 2016-17 & 2017-18

- Developed communication materials for deployment of near-zero emission (NZE) heavy-duty vehicle technologies and renewable natural gas (RNG)
- Cosponsored event with the CNG Vehicle Coalition to promote opportunities for NZE and RNG
- Cosponsored Rethink Methane Symposium in Sacramento and ACT Expo in Long Beach

Proposed Activities

FYs 2018-19 & 2019-20

- Further outreach efforts to the public and consumers on the benefits of RNG and its use in near-zero NOx medium- and heavy-duty NGVs
- Enhance refueling infrastructure and promote greater use of RNG
- Cosponsor relevant conferences, projects and studies to further the deployment of next-generation NG engines and RNG
- Develop strategies to improve effectiveness of CNGVP mission

Recommended Actions

- Recognize up to \$170,000 in membership dues over a two-year period from participating and future members into the CNGVP Fund (40)
- Authorize the transfer of \$25,000 from the Clean Fuels Program Fund (31) to the CNGVP Fund (40) for SCAQMD's FYs 2018-19 and 2019-20 membership dues
- Approve the CNGVP Budget for FYs 2018-19 & 2019-20
- Authorize Executive Officer to approve expenditures from the CNGVP Fund (40) for activities and projects selected by the CNGVP to meet Partnership goals up to \$75,000 per expenditure and upon availability of funds

[Go to SLIDES](#)

DRAFT
Technology Committee Agenda #3

BOARD MEETING DATE: July 6, 2018

AGENDA NO.

PROPOSAL: Recognize and Transfer Revenue and Execute Contract to Develop and Demonstrate Zero Emission Trucks and EV Infrastructure

SYNOPSIS: SCAQMD fosters development and demonstration of zero emission goods movement technologies. Daimler Trucks North America LLC (DTNA) proposes to develop 20 heavy-duty electric trucks with EV infrastructure that includes energy storage systems to demonstrate the trucks in real-world commercial fleet operations in and around environmental justice communities. These actions are to recognize revenue up to \$2,000,000 from the San Pedro Bay Ports and transfer up to \$4,440,000 from the State Emissions Mitigation Fund (39) and \$11,230,072 from the Clean Fuels Program Fund (31) into the Advanced Technology Goods Movement Fund (61). Of the \$11,230,072, up to \$2,000,000 is for a temporary loan pending receipt of the Ports' cofunding and \$9,230,072 is for SCAQMD's cost-share for the project. Staff is actively seeking additional cofunding; if realized, SCAQMD's cost-share may decrease, subject to Board consideration. This action is to also execute a contract with DTNA to develop and demonstrate 20 heavy-duty electric trucks and EV infrastructure in an amount not to exceed \$15,670,072 from the Advanced Technology Goods Movement Fund (61).

COMMITTEE: Technology, June 15, 2018; Recommended for Approval

RECOMMENDED ACTIONS:

1. Recognize, upon receipt, up to \$2,000,000 from the San Pedro Bay Ports into the Advanced Technology Goods Movement Fund (61) to develop and demonstrate zero emission trucks and EV infrastructure;
2. Transfer up to \$4,440,000 from the State Emissions Mitigation Fund (39) into the Advanced Technology Goods Movement Fund (61) to develop and demonstrate zero emission trucks and EV infrastructure;

3. Transfer \$9,230,072 from the Clean Fuels Program Fund (31) into the Advanced Technology Goods Movement Fund (61) for SCAQMD's project cost-share;
4. If needed, transfer up to \$2,000,000 as a temporary loan from the Clean Fuels Program Fund (31), pending receipt of the Ports' cofunding;
5. Transfer any unspent funds from the Advanced Technology Goods Movement Fund (61) to the Clean Fuels Program Fund (31) upon project completion;
6. Authorize the Chairman to execute a contract with Daimler Trucks North America LLC to develop and demonstrate up to 20 heavy-duty electric trucks and EV infrastructure in an amount not to exceed \$15,670,072 from the Advanced Technology Goods Movement Fund (61).

Wayne Nastri
Executive Officer

MMM:FM:NB:JI

Background

The SCAQMD is committed to achieving healthful air in the South Coast Air Basin (Basin) and all areas within the SCAQMD's jurisdiction. The 2016 AQMP seeks to achieve and maintain all state and federal air quality standards within attainment deadlines by the earliest date achievable to comply with federal Clean Air Act requirements. In order to meet these goals, the 2016 AQMP includes an integrated control strategy addressing multiple objectives for a more efficient path in meeting all clean air standards. Demonstration and commercialization projects will be crucial to help deploy and reduce costs for zero emission technologies. A key element of the implementation strategy is to engage original equipment manufacturers (OEMs) in the development and demonstration of zero emission technologies. The OEMs have the ability to design, develop, manufacture, market and service large volumes of vehicles which are needed in the Basin to get the emission reductions to meet air quality goals in the region.

There has been an increased interest in the marketplace for zero emission trucks including battery-electric technology in the heavy-duty goods movement sector, and the adoption of the San Pedro Bay Ports' Clean Air Action Plan has further stimulated this interest among fleets and others. While the benefits of electric drive vehicles are widely accepted, the cost of the technology and the availability of charging assets needs to be carefully considered and planned for implementing new technology programs. Additionally, OEMs are in desperate need of operational data and available vehicles to provide this data. Daimler Trucks North America LLC (DTNA), the world's leader in

heavy-duty truck sales, proposes to implement the Daimler Zero Emission Trucks and EV Infrastructure Project.

Proposal

Under the Daimler Zero Emission Trucks and EV Infrastructure Project, DTNA will develop battery-electric heavy-duty trucks and demonstrate them in real-world commercial fleet operations in and around environmental justice communities within the SCAQMD's jurisdiction to gather data and information from the end-users including performance under specific duty-cycle applications. DTNA will utilize the data and information to move toward the commercial production and sales phase. DTNA will supply ten Class 6 trucks with a gross vehicle weight rating (GVWR) up to 26,000 pounds and ten Class 8 trucks with a GVWR up to 80,000 pounds, including associated EV charging infrastructure. Fleet partners will be identified and the trucks integrated into a range of services and applications to gather operational data to improve each charging and utilization scheme, with seven of the Class 8 trucks to be used in port drayage operations, supporting the goods movement industry.

The drivetrain of the Class 6 electric trucks is capable of delivering over 220 horsepower, and the design allows for a burdened load with GVWR up to 26,000 pounds. Each charge of the battery can give operators 150-200 miles of service range, and the medium-duty design comes with a 4x2 axle configuration with a day cab of 106 inches. The batteries that come equipped with the Class 6 truck design will have a capacity of 225-300 kilowatt hours (kWh). The truck is capable of being charged with a Combined Charging Standard Type 1 (CCS T1).

The Class 8 truck model will be designed to have a range of 150-200 miles between charging. The electric drivetrain is capable of delivering over 455 horsepower and is designed to meet the needs and specifications of transportation of a GVWR of up to 80,000 pounds. The vehicles will have a 6x4 axle configuration with a 116-inch day cab, and the battery system will provide 400-600 kWh of usable power. The Class 8 vehicles will also use the CCS T1 charging systems.

DTNA will install DC fast charger stalls at four fleet locations providing an adequate number of chargers to support their fleet of 20 trucks. Each fast charger will be equipped with an SAE J1772 Combo (CCS T1) interface and will be capable of charging at up to 160 kW. The chargers will also be connected remotely for troubleshooting, management and data collection. Each DC fast charger will be paired with multiple battery energy storage systems (ESS) to optimize utility costs and reduce infrastructure enhancements required to support the chargers. DTNA will deploy the battery-based ESS paired with each high power vehicle charger. The proposed chargers will allow an 80% state of charge for the Class 6 trucks in two hours and the Class 8 trucks in three hours. Deploying two chargers per site will result in potential peak power demands of approximately 335 kW. The ESS will be comprised of two or more

modular units paired with a single charger. Each unit will be capable of delivering 60-70 kW at 480 volts AC power and will store 110-120 kWh of energy. Utilizing grid-aware scheduling algorithms, the ESS will charge from the grid during low-cost periods and over extended periods of time. This allows the ESS to recharge from the grid at a much lower peak power demand, reducing utility and facility infrastructure requirements and reducing or eliminating utility demand charges.

Sole Source Justification

Section VIII.B.2 of the Procurement Policy and Procedure identifies four major provisions under which a sole source award may be justified. The request for a sole source award for this project is made under provision B.2.d.(1): Projects involving cost-sharing by multiple sponsors. This development and demonstration project will be cost-shared by the Ports and DTNA, with additional cofunding actively being sought.

Benefits to SCAQMD

SCAQMD's Clean Fuels Program supports development and demonstration of zero emission electric transportation powered by batteries for goods movement technologies. The SCAQMD has also supported a number of activities directed toward the commercialization of electric vehicles and associated infrastructure. This proposed project is included in the *Technology Advancement Office Clean Fuels Program 2018 Plan Update* under "Develop and Demonstrate Electric and Hybrid Vehicles" and "Develop and Demonstrate EV Infrastructure for Deployment of Plug-In Electric and Hybrid Electric Vehicles."

Resource Impacts

The total cost for the Daimler Zero Emission Trucks and EV Infrastructure Project will not exceed \$31,340,144. DTNA will contribute \$15,670,072. A transfer of \$4,440,000 will be made from the State Emissions Mitigation Fund (39) to the Advanced Technology Goods Movement Fund (61) for this project, and SCAQMD's contract with DTNA will not exceed \$15,670,072 from the Advanced Technology Goods Movement Fund (61). San Pedro Bay Ports will cofund the project in the amount of \$2 million, although additional cofunding is actively being sought. SCAQMD's cost-share will not exceed \$9,230,072 from the Clean Fuels Program Fund (31), but may decrease if additional cofunding is realized. A temporary loan of up to \$2,000,000 will be made from the Clean Fuels Program Fund (31) to the Advanced Technology Goods Movement Fund (61), pending receipt of the Ports' cofunding. Any unspent funds will be transferred back to the Clean Fuels Program Fund (31) after project completion.

The funding sources and partners for this project are identified in the following table.

Funding Source	Amount	Percent
DTNA	\$15,670,072	50
State Emissions Mitigation Fund (39)	\$4,440,000	14
San Pedro Bay Ports*	\$2,000,000	6
SCAQMD (<i>Requested</i>)	\$9,230,072	30
Total	\$31,340,144	100

**pending funding approval by Harbor Commissions*

Sufficient funds are available in the Clean Fuels Program Fund (31). The Clean Fuels Fund was established as a special revenue fund resulting from the state-mandated Clean Fuels Program. The Clean Fuels Program, under Health and Safety Code Sections 40448.5 and 40512 and Vehicle Code Section 9250.11, establishes mechanisms to collect revenues from mobile sources to support projects to increase the utilization of clean fuels, including the development of the necessary advanced enabling technologies. Funds collected from motor vehicles are restricted, by statute, to be used for projects and program activities related to mobile sources that support the objectives of the Clean Fuels Program.

The State Emissions Mitigation Fund (39) was established during FY 2002 to account for funds received from CARB to fund selected projects on emission reductions within the South Coast Air Basin. This was in response to the Governor's statewide program to mitigate excess emissions from peaker power generation units to alleviate the power crisis in California. In January 2018, the Board approved the allocation of \$4,440,000 for mobile source emission reduction projects and supporting infrastructure from the State Emissions Mitigation Fund (39). The proposed mobile source emission reduction and infrastructure project has been selected to utilize these funds.

The Advanced Technology Goods Movement Fund (61) was established to facilitate the development and deployment of low and zero emission goods movement technologies. With the transfers from Funds 31 and 39, there will be sufficient funds for the proposed project with DTNA.

Agenda Item #3

Joseph Impullitti

Recognize and Transfer Revenue and
Execute Contract to Develop and
Demonstrate Zero Emission Trucks
and EV Infrastructure

Background

- 2016 AQMP calls for significant NO_x reductions, mainly from on- and off-road sources
- Increased interest in zero emission trucks from companies in heavy-duty goods movement
- Engaging original equipment manufacturers (OEMs) in the development and demonstration is key
 - Ability to design, develop, manufacture, market and service large volumes of vehicles
 - Eager to leverage technology for heavy-duty use



Background (cont'd)

- Daimler Trucks North America LLC (DTNA) is the world's leader in heavy-duty truck sales
- Lack of available vehicles to collect key operational data for varied duty cycles
- DTNA and other OEMs need real-world operational data to scale up production



Proposal

- Develop, deploy and support battery-electric heavy-duty trucks (150-200 mile range per charge) in and around EJ communities
- Collect data and information from the end-users including performance under specific duty cycles
- Utilize data, information and feedback to move to commercial production and sales
- Identify and secure fleet partners for 20 electric trucks-ten Class 6 trucks and ten Class 8 trucks
- Deploy vehicles in range of services to assess operational data, including seven Class 8 trucks in port drayage operations



Proposal (cont'd)

- Install DC fast charger stalls at 4 fleet locations
- Pair DC fast chargers with multiple battery Energy Storage Systems (ESS) to reduce utility and infrastructure costs
- Utilize grid-aware scheduling algorithms to optimize ESS recharging and reduce costs
- Improve charging schemes
- Reduce utility and facility infrastructure requirements



Proposed Project Funding

Project Partner	Funding Amount	Percent
DTNA	\$15,670,072	50
State Emissions Mitigation Fund (39)	\$4,440,000	14
San Pedro Bay Ports*	\$2,000,000	6
SCAQMD (<i>Requested</i>)	\$9,230,072	30
Total	\$31,340,144	100

*pending funding approval by Harbor Commissions

Recommended Actions

- Recognize up to \$2,000,000 from the San Pedro Bay Ports into the Advanced Technology Goods Movement Fund (61) to develop and demonstrate zero emission trucks and EV infrastructure
- Transfer \$4,440,000 from the State Emissions Mitigation Fund (39) into the Advanced Technology Goods Movement Fund (61) to develop and demonstrate zero emission trucks and EV infrastructure
- Transfer \$9,230,072 from the Clean Fuels Program Fund (31) into the Advanced Technology Goods Movement Fund (61) for SCAQMD's project cost-share

Recommended Actions (cont'd)

- If needed, transfer up to \$2,000,000 as a temporary loan from the Clean Fuels Program Fund (31), pending receipt of cofunding from Ports
- Transfer any unspent funds from the Advanced Technology Goods Movement Fund (61) to the Clean Fuels Program Fund (31) upon project completion
- Execute contract with DTNA to develop and demonstrate up to 20 heavy-duty electric trucks and EV infrastructure in an amount not to exceed \$15,670,072 from the Advanced Technology Goods Movement Fund (61)