



Alameda-Contra Costa Transit District

STAFF REPORT

TO: AC Transit Board of Directors
FROM: Michael A. Hursh, General Manager
SUBJECT: Funding Agreement with Center for Transportation and the Environment for the Fuel Cell Electric Bus Commercialization Consortium Project

ACTION ITEM

RECOMMENDED ACTION(S):

Consider authorizing the General Manager or his designee to execute a funding agreement with the Center for Transportation and the Environment for the Fuel Cell Electric Bus Commercialization Consortium Project.

BACKGROUND/RATIONALE:

The District partnered with the Center for Transportation and the Environment (CTE), the Orange County Transportation Authority, Linde, New Flyer, and Ballard to submit a grant application to the California Air Resources Board (CARB) for the FY2016 Zero-Emission Truck and Bus Pilot Commercial Deployment Project grant program. The project, entitled the Fuel Cell Electric Bus Commercialization Consortium Deployment (FCEBCC) Project, was awarded \$22,347,502, of which \$4,813,200 is for the District to purchase ten hydrogen fuel cell buses and \$3,676,736 is for upgrading the hydrogen fueling facilities at Division 2.

AC Transit will execute and manage agreements with New Flyer for the bus procurements and Linde for the hydrogen station build and upgrade. CTE, as the Grantee, is responsible for program administration and project and budget oversight, and will act as the technical project manager. CTE will pass through reimbursements from CARB to the District as expenses are incurred by the projects.

The Bay Area Air Quality Management District (BAAQMD) has also committed to contributing \$1,000,000 for the FCEBCC Project towards the cost of the bus purchase. The BAAQMD funds are the subject of a separate staff report.

BUDGETARY/FISCAL IMPACT:

The total cost of purchasing the ten hydrogen fuel cell buses is \$13,523,200 of which \$5,813,200 will be funded by the CARB and BAAQMD grants. The District will provide the remaining funds by contributing FTA funds received for the purchase of replacement buses and District matching funds for bus procurements. The FTA and District match funds would be used to purchase replacement buses regardless if they were zero-emission or not, so the District is not contributing any extra funding for these buses.

The hydrogen fueling station upgrade project will be funded entirely by the CARB grant with no required matching funds. The District will provide in-kind contribution by operating and collecting data on the performance of the buses and fueling station as part of the overall FCEBCC project.

ADVANTAGES/DISADVANTAGES:

There are no disadvantages to approving the action requested in this staff report. The advantages are that the District will have funding to purchase ten new fuel cell buses and upgrade the hydrogen fueling facilities at Division 2.

ALTERNATIVES ANALYSIS:

The District could decline the Agreements with both CTE and BAAQMD; however this is not recommended as the funds would be forfeited.

PRIOR RELEVANT BOARD ACTION/POLICIES:

Staff Report 15-277 - CARB Zero Emission Truck and Bus Pilot Commercial Deployment and FTA low or No Vehicle Emission Deployment Program Grant Applications.

ATTACHMENTS:

1. The Center for Transportation and the Environment and Alameda-Contra Costa Transit District Subrecipient Agreement.

Approved by: Claudia L. Allen, Chief Financial Officer

Reviewed by: Denise C. Standridge, General Counsel
Salvador Llamas, Director of Maintenance
Chris Andrichak, Director of Management and Budget

Prepared by: Evelyn Ng, Senior Capital Planning and Grants Specialist

THE CENTER FOR TRANSPORTATION AND THE ENVIRONMENT
AND
ALAMEDA-CONTRA COSTA TRANSIT DISTRICT
SUBRECIPIENT AGREEMENT

THIS SUBRECIPIENT AGREEMENT (the "Agreement") is entered into this ____ day of _____, 2017, by and between THE CENTER FOR TRANSPORTATION AND THE ENVIRONMENT ("CTE"), located at 730 Peachtree Street, Suite 760 Atlanta, GA 30308 and the ALAMEDA-CONTRA COSTA TRANSIT DISTRICT ("AC Transit") located at 1600 Franklin Street, Oakland, CA 94612, both hereinafter referred to collectively as the "Parties" and individually as "Party."

Whereas, CTE, in collaboration with AC Transit, New Flyer Industries, and Linde LLC, applied for and is the recipient of grant funding from the California Air Resources Board ("CARB"), under Grant Agreement No. G16-LCTI-02, to develop and deploy ten (10) zero-emission fuel cell electric buses and upgrade its Emeryville Division hydrogen refueling station, referred to in whole as the Fuel Cell Electric Bus Commercialization Consortium Deployment Project (herein, "FCEBCC Project" or "Project"); and

Whereas, CTE and AC Transit desire to enter into this Agreement for AC Transit to provide sufficient match funding and personnel support to implement the FCEBCC Project, including the operation of the buses and refueling station and the collection of performance data through at least March 30, 2020, to be reported to CARB; and

Whereas, AC Transit has the necessary experience, qualifications, and financial capabilities to provide the required match funding and operating and support services; and

Whereas, CTE and AC Transit intend to provide in this Agreement for the basic and underlying terms pursuant to which the Services will be performed.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the Parties agree as follows:

The following, are incorporated into this Agreement by reference:

Attachment I: CTE-AC TRANSIT Statement of Work

Attachment II: CARB California Climate Investments Grant Agreement with CTE

Attachment III: BAAQMD Grant Agreement with AC Transit

1) STATEMENT OF SERVICES TO BE PERFORMED

By executing this Letter Agreement, CTE and AC Transit agree to perform and comply with the scope of work set forth in the Statement of Work ("Work"), attached and fully incorporated herein as *Attachment I* and referenced in more detail in *Attachment II*. CTE and AC Transit shall perform the scope of work specified in the time and manner described and in accordance with the terms and provisions of this Agreement. CTE and AC Transit also

agree to perform the scope of work with that standard of professional care, skill, and diligence normally provided in the performance of similar services.

2) TERM OF AGREEMENT

The period of performance for this Agreement shall commence upon the execution of this Letter Agreement by both parties. Services, work products and/or deliverables defined in the Statement of Work shall be completed no later than March 31, 2020.

3) AGREEMENT AMOUNT

CTE has been awarded a California Air Resources Board (CARB) California Climate Investments grant (“CCI Grant”) in the amount of \$22,347,502, to be allocated to AC Transit and the Orange County Transportation Authority (OCTA) in Orange, CA for the procurement of buses, fueling infrastructure, and upgrades to maintenance facilities. AC Transit has agreed to match its share of these grant funds with \$7,710,000 in cash contributions, \$3,418,396 in cost share, and \$1,000,000 in grant funds from the Bay Area Air Quality Management District (BAAQMD). The total Agreement Amount to be reimbursed to AC Transit by CTE for the scope of work defined under this Agreement shall not exceed \$8,489,936. The distribution of these funds is outlined in Table 1 below:

Table 1: AC Transit FCEBCC Grant and Match Fund Distribution					
	Bus	Fueling Station	Maintenance Center Upgrades	Deployment and Data Collection	Total
CARB - CCI Grant	\$4,813,200	\$3,676,736			\$8,489,936
BAAQMD Grant	\$1,000,000				\$1,000,000
AC Transit Cash	\$7,710,000				\$7,710,000
Total Cash	\$13,523,200	\$3,676,736			\$17,199,936
New Flyer In-Kind				\$62,500	\$62,500
Linde In-Kind					
AC Transit In-Kind				\$3,418,396	\$3,418,396
Total In-Kind				\$3,480,896	\$3,480,896
Total Project	\$13,523,200	\$3,676,736		\$3,480,896	\$20,680,832

4) REIMBURSEMENT

This is a Cost Reimbursable agreement and CTE will reimburse AC Transit for services provided, services and equipment purchased, and travel expenses incurred, based on actual and allowable costs in accordance with the Project Milestones and Disbursement Plan in Table 2 below. CTE will request reimbursement from CARB by the end of the month that an

invoice is received from AC Transit. CTE will reimburse AC Transit within 10 business days of CTE's receipt of the money from CARB.

AC Transit agrees that it will seek and obtain reimbursement for eligible Project costs with financial and progress reports required to date. CTE reserves the right to withhold payment when the invoiced services, purchases, or expenses are not performed satisfactorily or in accordance with allowable charges until such errors are remedied.

Table 2: AC Transit Project Milestones and Disbursement Plan by Task				
Milestone	Task Description	CARB Project Funding	BAAQMD Project Funding¹	AC Transit Project Funding
Task 2	Bus Acquisition, Build, Delivery and Commissioning	\$4,813,200	\$1,000,000	\$7,710,000
8.1	Recurring Milestone: Bus build including installation of axles and verification of delivery of fuel cell and hydrogen storage systems to New Flyer: Tasks 2.5.1 and 2.5.3, to be disbursed at \$200,000 per bus not to exceed Milestone 8.1 total.	NF: \$2,000,000		
10.1	Recurring Milestone: Delivery and initial acceptance of first bus and remaining nine; Tasks 2.7.1 and 2.7.3, to be disbursed at \$171,205 per bus, not to exceed Milestone 10.1 total.	NF: \$1,712,050	NF: \$1,000,000	NF: \$6,553,500
11.1	Recurring Milestone: Final payment for buses upon proof of 40-hours of in-service performance without problems; Tasks 2.8.1 and 2.8.3, to be disbursed at \$110,120 per bus, not to exceed Milestone 11.1 total.	NF: \$1,101,200		NF: \$1,156,500
Task 4	AC Transit Hydrogen Station Upgrades	\$3,676,736	\$0	\$0 (In-Kind)
19	Recurring Milestone: Permitting: Task 4.5, to be disbursed on a time and materials basis, not to exceed Milestone 19 total.	ACT: \$21,000		

¹ The BAAQMD grant of \$1 million will be solely governed by an exclusive Grant Agreement between AC Transit and BAAQMD. The BAAQMD grant is critical to the purchase of buses and the successful completion of the project. CTE will assist AC Transit in preparing periodic reports for BAAQMD on project status and the performance of the buses, up through completion of a final report for BAAQMD, or March 31, 2020, whichever is sooner.

Table 2: AC Transit Project Milestones and Disbursement Plan by Task

Milestone	Task Description	CARB Project Funding	BAAQMD Project Funding¹	AC Transit Project Funding
20.1	Site and station design plans: Linde completes Task 4.3.1.	Linde: \$926,000		
20.2	Recurring Milestone: Work with Linde on completing Task 4.3, including all subtasks, to be disbursed on a time and materials basis not to exceed Milestone 20.2 total.	ACT: \$155,000		
21.1	Completed Equipment Drawings: Task 4.4.2.	Linde: \$265,000		
21.2	Equipment Manufactured and Shipped: Task 4.4.4	Linde: \$529,000		
22	Recurring Milestone: Station construction and site preparation: Tasks 4.4 and 4.6, including all subtasks, to be disbursed on a time and materials basis not to exceed Milestone 22 total.	ACT: \$854,000		
23.1	Equipment Installation and Commissioning: Task 4.7.1	Linde: \$662,000		
24.2	Linde completes all commissioning activities and training: Task 4.8	Linde: \$264,736		
Task 6	<i>Bus Deployment, Hydrogen Station Operation and Maintenance, and Data Collection</i>	\$0	\$0	\$3,418,396 (In-Kind)
29	Recurring Milestone: AC Transit FCEB operator training, in-service operations, and data collection. Tasks 6.1.1, 6.1.2, 6.1.3, and 6.1.4, to be accrued on a time and materials basis.			\$2,905,636 (In-Kind)
30	Recurring Milestone: AC Transit Hydrogen Station Operations and Data Collection: Task 6.2, to be accrued on a time and materials basis.			\$512,760 (In-Kind)
TOTALS		\$8,489,936	\$1,000,000	\$11,128,396

5) INVOICES

AC Transit will submit invoices by the 10th day following each calendar month for expenses incurred during the preceding month based on milestones achieved in accordance with the CARB Grant Agreement. Invoices shall contain appropriate supporting documentation of actual costs incurred and paid by AC Transit in performing their scope of work under this Agreement. A final invoice must be submitted by AC Transit no later than February 28, 2020. Invoices shall be submitted by mail or other delivery carrier to the Center for Transportation and the Environment, 730 Peachtree St., Suite 760, Atlanta, GA 30308 and by email to CTE’s designated recipient (admin@cte.tv) and the Sr. Project Manager (Jaimie@CTE.tv).

6) ADHERENCE TO CARB AND BAAQMD TERMS AND CONDITIONS

AC Transit will adhere to, and support CTE in fulfilling, all terms and conditions stipulated by the CARB grant agreement (Attachment II), including but not limited to adherence to the CARB Grant Agreement Section 10 - General Provisions, the BAAQMD Grant Agreement General Terms and Conditions (Attachment III), and to CARB and BAAQMD Grant Agreement terms and conditions whose compliance would necessitate compliance from all parties in the performance of the Project.

7) TERMINATION

This agreement may be terminated in whole or in part as follows:

- A. By Either party, if the Other Party materially fails to comply with the terms and conditions of this Agreement and such failure is not corrected within fifteen (15) days following receipt of written notice from the non-breaching party.
- B. By CTE, upon thirty (30) days written notification to AC Transit setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated.
- C. By AC Transit, upon thirty (30) days written notification to CTE setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated.
- D. By CTE, if CTE’s prime awards supporting this Letter Agreement is terminated by CARB.
- E. Upon Termination, AC Transit shall be paid in accordance with this Agreement for all Work satisfactorily performed before the effective date of termination under Clause 7.B., 7.C., or 7.D. Upon termination, following payment by CTE of AC Transit’s costs incurred, AC Transit shall promptly deliver to CTE all copies of documentation and other information and data prepared or developed by AC Transit under this Agreement, to include works already in progress, unless otherwise instructed by CTE.

8) INSURANCE

- A. For the duration of this Agreement, AC Transit shall maintain or cause to be maintained insurance sufficient to cover all risks of injury, death, or damage to persons or property as well as loss, theft, or destruction, partial or complete, of the upgraded equipment for the Emeryville hydrogen refueling facility, buses, and related equipment or any portion thereof, including those acts by any of its employees and subcontractors. All policy limits must adhere to State of California minimum insurance requirements for transit operators and Federal Motor Carrier Safety Administration minimum insurance requirements and must provide sufficient coverage for the Fueling Station, Buses, and related equipment, which at the start of the Agreement term was \$17,199,936.
- B. AC Transit shall provide CTE with proof of the insurance required by this clause and shall list CTE as an additional insured on all related policies.
- C. In the event of any loss, theft, destruction or damage of the Fueling Station, Buses, or related equipment, AC Transit shall promptly notify CTE and shall timely repair the damaged property to the same standard or condition as prior to the damage or loss, except with prior written approval of CTE.
- D. AC Transit understands and agrees that the CARB and BAAQMD may retain rights to any insurance proceeds received for damaged or destroyed property purchased, in whole or part, with Grant funds and that it will not encumber those rights.

9) INDEMNIFICATION

- A. Each Party (the "Indemnifying Party") agrees to, and will, indemnify, defend, and hold harmless the other Party (the "Indemnitee") and its Board Members, directors, officers, agents, employees, and representatives against any liabilities, losses, claims, expenses (including attorney's fees) or damage they may suffer as a result of third party claims, demands, actions, costs or judgments resulting or alleged to have resulted from the Indemnifying Party's negligence or willful misconduct related to performance under this contract, except to the extent that the liability, loss or damage results from (i) the non-Indemnifying Party's failure to substantially comply with any applicable law; or (ii) the negligence or willful misconduct of any board member or employee of the non-Indemnifying Party.
- B. It is further agreed by and between the Parties that the Indemnitee shall (a) promptly notify the Indemnifying Party in writing of any claim for which indemnification is sought and (b) forward to the Indemnifying Party any other information available regarding the claim as promptly as is reasonably practicable; provided that the failure to provide such notice shall not release the Indemnifying Party from any of its obligations hereunder except to the extent that the Indemnifying Party is actually and materially prejudiced by such failure.
- C. The Indemnifying Party shall be entitled, at its option, to assume and control the defense of any third party claim under this section, at its expense and through

counsel of its choice if it gives notice of its intention to do so to the Indemnitee within 45 days of the receipt of notice of the right to be indemnified.

10) GENERAL PROVISIONS

- A. Independent actor. AC Transit, and its agents and employees, if any, in their performance of this Agreement, shall act in an independent capacity and not as officers, employees or agents of CTE.
- B. Subcontracting. AC Transit may subcontract with third party providers in performance of specific tasks included in AC Transit's Statement of Work. In the event that subcontractors are used, AC Transit must notify CTE of the intent to use subcontractors and obtain CTE approval, which will not unreasonably be withheld. AC Transit shall ensure subcontractor adherence to the same quality standards and assurances required of AC Transit, including adherence to applicable CARB and Terms and Conditions and non-disclosure agreements.
- C. Compliance with Laws. AC Transit agrees to comply with all Federal, State, and local laws, rules, guidelines, requirements, ordinances, codes and regulations and orders of public authorities in the performance of this Agreement.
- D. Nondiscrimination. During the performance of this Agreement, AC Transit and its contractors, shall not unlawfully discriminate against, harass, or allow harassment against any employee or applicant for employment because of sex, race, religion, color, national origin, ancestry, disability, sexual orientation, medical condition, marital status, age (over 40) or allow denial of family-care leave, medical-care leave, or pregnancy-disability leave. AC Transit and its contractors shall ensure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination and harassment.
- E. Prevailing wages and labor compliance. If applicable, AC Transit agrees to be bound by all the provisions of State Labor Code Section 1771 regarding prevailing wages. If applicable, AC Transit shall monitor all subcontracts subject to reimbursement from this Agreement to ensure that the prevailing wage provisions of State Labor Code Section 1771 are being met.
- F. Conflict of Interest. AC Transit certifies that it is in compliance with applicable State and/or federal conflict of interest laws.
- G. Fiscal management systems and accounting standards. AC Transit agrees that, at a minimum, its fiscal control and accounting procedures will be sufficient to permit tracing of grant funds to a level of expenditure adequate to establish that such funds have not been used in violation of State law or this Grant Agreement.
- H. Audit and Records Retention. AC Transit agrees that CTE, CARB, the Department of General Services, Department of Finance, the Bureau of State Audits, or their designated representative shall have the right to review and to copy any records and supporting documentation pertaining to the performance of this Agreement and all funds received. AC Transit agrees to maintain such records for possible audit for a minimum of three (3) years after the term of this Agreement is completed, unless a

longer period of records retention is stipulated. AC Transit agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records. Further, AC Transit agrees to include similar right of the State to audit records and interview staff in any subcontract related to performance of this Agreement.

- I. Entire Agreement. This Agreement constitutes the entire Agreement of the Parties with respect to the subject matter of the Agreement and supersedes all previous oral and written agreements, understandings, and communications of the Parties relating to such matters.
- J. Timeliness. Time is of the essence in this Agreement. AC Transit shall proceed with and complete the Project in an expeditious manner.
- K. Amendment or Waiver. This Agreement may not be modified, amended or waived except by a written instrument executed by duly authorized representatives of both parties. No failure or delay in exercising any right shall operate as a waiver thereof.
- L. Severability. Should any part of this agreement be rendered or declared invalid or unenforceable by a court of competent jurisdiction, it shall not affect the validity of any other provision, which shall remain in full force and effect.
- M. Force majeure. Neither CTE nor AC Transit shall be liable for or deemed to be in default for any delay or failure in performance under this Agreement or interruption of services resulting, directly or indirectly, from acts of God, enemy or hostile governmental action, civil commotion, strikes, lockouts, labor disputes, fire or other casualty, etc.
- N. Assignment. Neither Party may assign its respective rights or duties under this agreement to a third Party (except to a successor in interest to substantially all of the business of the assignor) without the prior written consent of the other Party.
- O. Headings. Headings on the clauses of this Agreement are for convenience and reference only, and the words contained therein shall in no way be held to explain, modify, amplify, or aid in the interpretation, construction, or meaning of the provisions of this Agreement.
- P. Governing Law. This Agreement will be governed by and constructed in accordance with the laws of the State of California, USA, without regard to the conflict of laws principles thereof

Please indicate your acceptance of these terms by returning one signed copy of this letter agreement to CTE.

Center for Transportation and the Environment (CTE):

Read, agreed to, and accepted by the Alameda-Contra Costa Transit District (AC Transit):

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

Approved as to Form and Content:

By: _____

Denise Standridge
AC Transit General Counsel

Enclosures:

- Attachment I:* CTE-AC Transit Statement of Work
- Attachment II:* CARB California Climate Investments Grant Agreement with CTE
- Attachment III:* BAAQMD Grant Agreement with AC Transit

Attachment I: CTE-AC Transit Statement of Work

CTE-AC Transit FCEBCC SCOPE OF WORK

Project Overview

The FCEBCC Project will deploy 10 new 40-foot fuel cell electric transit buses (FCEB) in daily service on regular service routes in the Alameda-Contra Costa Transit District (AC Transit) service area operated by AC Transit. New Flyer will build the buses using fuel cell power systems supplied by Ballard Power Systems. The project will also include upgrades to AC Transit's existing hydrogen refueling facility at its operating division in Emeryville, CA. Linde will provide, install, and maintain fueling infrastructure and supply the hydrogen required to support the project.

AC Transit will own, operate, and maintain the buses and hydrogen infrastructure and will continue to deploy the vehicles in daily transit service for the useful life of the equipment. CTE will be responsible for program administration and project and budget oversight, and will act as the technical project manager. In this capacity, CTE will collaborate with Transworld Associates, LLC (TWA) and Byrne Zero-Emission, LLC (BZE) in completing technical reviews of the fuel cell bus and fueling station specifications, ensuring adherence to quality assurance and quality control (QA/QC) requirements, performing bus and station inspections, and providing training assistance and ongoing operational support.

CTE Responsibilities

1. Project liaison with the California Air Resources Board (CARB) and supporting AC Transit's liaison with the Bay Area Air Quality Management District (BAAQMD)
2. Contract development and execution
3. Development of vehicle technical and commercial procurement specifications
4. Oversight of vehicle and station construction
5. Project reporting to CARB and assisting AC Transit with reports for BAAQMD
6. Coordination of vehicle and station training and startup
7. Coordination of first-responder training
8. Ongoing service support through the contract term
9. Data reporting to CARB and BAAQMD, and
10. Processing AC Transit invoices and seeking reimbursement funds from CARB.

AC Transit Responsibilities

1. Owning, operating, and maintaining the FCEBs and fueling station
2. Executing and managing agreements with New Flyer for the bus procurements and Linde for the hydrogen station build upgrade
3. Licensing the buses to operate in revenue passenger service
4. Providing Linde with power, telecommunications, and water utilities to operate the Emeryville fueling station
5. Managing the design and construction of civil improvements to the Emeryville station, including the addition of a canopy and fueling island at the existing diesel fueling facility and installation of the subterranean raceway for hydrogen, electrical, and

telecommunications lines between the diesel fueling station and the hydrogen station control equipment

6. Obtaining all necessary permits, with assistance from CTE, to build and operate the fueling station
7. Installing 240V power connectors to plug in the 10 FCEBs for freeze protection of the fuel cells
8. Providing maintenance and service facilities at its operating divisions to safely work on its fleet of FCEBs
9. Submitting invoices for bus and station expenses to CTE for reimbursement from CARB with documentation of all expenses
10. Submitting quarterly reports to CTE on project status, and monthly reports if requested by CTE
11. Ensuring that the vehicles are deployed in regularly scheduled service along with its diesel fleet of buses for the useful life of the equipment
12. Working with CTE, New Flyer, and Linde to provide performance data on the FCEBs and one or more diesel and battery-electric buses operating the same or similar duty cycles, and the performance of the Emeryville fueling station, and
13. Assisting CTE in the preparation of a final report at the conclusion of the project.

Fuel Cell Electric Buses

In addition to building and delivering the fuel cell buses, New Flyer will support the deployment of the buses with service and operating manuals, and will collaborate with CTE in developing and implementing a Maintenance Support Plan. CTE will coordinate with AC Transit on a training program for mechanics and drivers. New Flyer and AC Transit will install the data collection equipment as approved by CARB on all new buses and at least one control diesel bus. Ballard will build and deliver the fuel cell power systems to New Flyer for integration into the 10 buses.

Fueling Station

Linde will be responsible for the design, engineering, and site construction plans for the upgrade to AC Transit' Emeryville fueling station, although AC Transit will be responsible for upgrades to the diesel fueling island and installation of the subterranean raceway for hydrogen, electrical, and telecommunications lines. Linde will work with CTE and AC Transit to develop technical specifications and secure permits. AC Transit will work with CTE in completing the necessary utility and facility upgrades at the Emeryville maintenance facility in advance of hydrogen station equipment and bus deliveries. CTE will organize and coordinate hydrogen fueling facility training to employees and first responders.

Attachment II: CARB CCI Grant Terms & Conditions

Subject: G16-ZBUS-01 Grant agreement package
Date: Monday, February 13, 2017 at 10:44:46 AM Pacific Standard Time
From: Goodbody, Leslie@ARB
To: Jaimie Levin
Attachments: G16-ZBUS-01 coversheet.pdf, G16-ZBUS-01 CTE-CARB agreement Exhibits A+B.pdf, Exhibit E Linde Biogas Letter (Final) signed.pdf

Hi Jaimie,

As promised I am sending you the complete grant agreement package for G16-ZBUS-01

Attached please find:

- Coversheet
- Exhibits A+B
- Exhibit E

For Exhibit C, please go to <https://www.arb.ca.gov/msprog/aqip/solicitations.htm>, FY 2014-15 AQIP and Low Carbon Transportation Solicitation Schedule. The documents that must be included in Exhibit C of the G16-ZBUS-01 grant agreement include the following documents associated with the Zero-Emission Truck & Bus Pilot Commercial Deployment Projects:

- Grant Solicitation
- Appendix A – Application
- Appendix B – Sample Grant Agreement
- Appendix C – Hydrogen Refueling Station Requirements
- Appendix D – Methodology for Determining Emissions Reductions and Cost-Effectiveness
- Appendix E – CEQA Compliance and Permitting Requirements

For Exhibit D, Grantee Application Package, the file is 59.5 MB and too large to send via email. Exhibit D of G16-ZBUS-01 agreement is the pdf file entitled "FCEBCC_AQIP_Zero Emission Truck and Bus Pilot_Application_2016-01-28.pdf" sent from CTE and delivered to ARB on January 29, 2016.

Please let me know if you have any questions.

Leslie Goodbody
Innovative Heavy Duty Strategies
Mobile Source Control Division
California Air Resources Board
1001 I Street, Sacramento, 95814
(916) 323-2961
lgoodbod@arb.ca.gov
www.arb.ca.gov



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

Mary D. Nichols, Chair
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

February 8, 2017

Mr. Dan Raudebaugh
Executive Director
Center for Transportation and the Environment
730 Peachtree Street N.E., Suite 760
Atlanta, GA 30308-1209


Dear Mr. Raudebaugh:

As indicated in my email to your associate, Jaimie Levin, the Fuel Cell Electric Bus Commercialization Consortium (FCEBCC) Project Grant Agreement was executed on February 8, 2017. Please attach the enclosed original signed coversheet for Grant Number G16-ZBUS-01 to the grant agreement package for this project sent to you on January 31, 2017. Together, this will constitute the complete Grant Agreement between the Center for Transportation and the Environment (CTE) and ARB.

Work can now begin on this project. I will be in contact with Jaimie Levin, CTE's Director of West Coast Operations, to schedule the project kick-off meeting.

If you have any questions, please contact me at (916) 323-2961 or by email at Leslie.Goodbody@arb.ca.gov.

Sincerely,


Leslie A. Goodbody, Air Resources Engineer
Innovative Heavy-Duty Strategies Section
Mobile Source Control Division

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

GRANT AGREEMENT COVER SHEET

GRANT NUMBER
G16-ZBUS-01

NAME OF GRANT PROGRAM Zero Emission Bus Pilot Commercial Deployment Projects	
GRANTEE NAME Center for Transportation and the Environment	
TAXPAYER'S FEDERAL EMPLOYER IDENTIFICATION NUMBER 58-2052891	TOTAL GRANT AMOUNT NOT TO EXCEED \$22,347,502.00
TERM OF GRANT AGREEMENT FROM: February 1, 2017	TO: June 30, 2020

This legally binding Grant Agreement, including this cover sheet and Exhibits A, B, C, D, and E attached hereto and incorporated by reference herein, is made and executed between the State of California, Air Resources Board (ARB) and the Center for Transportation and the Environment (the "Grantee").

Exhibit A – Grant Provisions

Exhibit B – Work Statement

- Attachment I: Budget Summary
- Attachment II: Project Milestones and Disbursement Schedule
- Attachment III: Project Schedule
- Attachment IV: Key Project Personnel


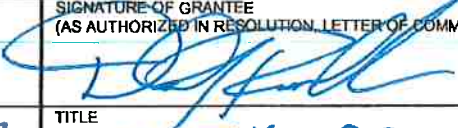
Exhibit C – Grant Solicitation

Exhibit D – Grantee Application Package (179 pages)

Exhibit E – Letter from ARB to Linde North America, Inc.

This Agreement is of no force or effect until signed by both parties. Grantee shall not commence performance until it receives written approval from ARB.

The undersigned certify under penalty of perjury that they are duly authorized to bind the parties to this Grant Agreement.

Air Resources Board		GRANTEE'S NAME (PRINT OR TYPE) DANIEL J. RAUDENBUSH	
SIGNATURE OF ARB'S AUTHORIZED SIGNATORY: 		SIGNATURE OF GRANTEE (AS AUTHORIZED IN RESOLUTION, LETTER OF COMMITMENT, OR LETTER OF DESIGNATION) 	
TITLE Administrative Services Division Chief, ARB	DATE 2/8/17	TITLE EXECUTIVE DIRECTOR	DATE 2-1-17
GRANTEE'S ADDRESS (INCLUDE STREET, CITY, STATE AND ZIP CODE) 730 PEACHTREE ST. SUITE 760 ATLANTA, GA 30308			

CERTIFICATION OF FUNDING

AMOUNT ENCUMBERED BY THIS AGREEMENT \$22,347,502.00	FISCAL YEAR/PROGRAM 2016/17 / 3510	FUND TITLE Greenhouse Gas Reduction Fund		
PRIOR AMOUNT ENCUMBERED FOR THIS AGREEMENT \$0.00	(OPTIONAL USE)			
TOTAL AMOUNT ENCUMBERED TO DATE \$0.00	ITEM 3900-101-3228	CHAPTER 320	STATUTE 2016	FISCAL YEAR 2016/17
OBJECT OF EXPENDITURE 403 (circled) 6100-702-57207				

I hereby certify upon my own personal knowledge that budgeted funds are available for the period and purpose of the expenditure stated above.

SIGNATURE OF AIR RESOURCES BOARD BUDGET OFFICE: 	DATE 1/31/17
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GRANT PROVISIONS

1. GRANT PARTIES AND CONTACT INFORMATION

- 1.1 The parties agree to comply with the requirements and conditions contained herein, as well as all commitments identified in the Grant Solicitation Air Quality Improvement Program and Low Carbon Transportation Greenhouse Gas Reduction Fund Investments: Zero-Emission Truck and Bus Pilot Commercial Deployment Project (Exhibit C) and Grantee Application Package (Exhibit D).
- 1.2 The California Climate Investments logo and name serves to bring under a single brand the many investments whose funding comes from the Greenhouse Gas Reduction Fund (GGRF). The logo represents a consolidated and coordinated initiative by the State to address climate change by reducing greenhouse gases, while also investing in disadvantaged communities and achieving many other co-benefits. The Grantee agrees to acknowledge the California Climate Investments program as a funding source from ARB's Low Carbon Transportation program whenever projects funded, in whole or in part by this Agreement, are publicized in any news media, websites, brochures, publications, audiovisuals, or other types of promotional material. The acknowledgement must read as follows: 'This publication (or project) was supported by the "California Climate Investments" (CCI) program.' Guidelines for the usage of the CCI logo can be found at www.arb.ca.gov/ccifundingguidelines.



1.3 **Grant Summary and Amendments (if applicable)**

Project Title: Air Quality Improvement Program and Low Carbon Transportation Greenhouse Gas Reduction Fund Investments Zero-Emission Truck and Bus Pilot Commercial Deployment Project: Fuel Cell Electric Bus Commercialization Consortium (FCEBCC) Project.

Funding Amount: \$22,347,502

Match Amount: \$23,152,357

1.4 Grant Parties and Contact Information

- a. This grant is from the California Air Resources Board (hereinafter referred to as ARB) to the Center for Transportation and the Environment (hereinafter referred to as Grantee or CTE).
- b. The ARB Project Liaison is Leslie Goodbody. Correspondence regarding this project shall be directed to:

Leslie Goodbody
Air Resources Board
Mobile Source Control Division
Post Office Box 2815
Sacramento, California 95812
Phone: (916) 323-1384
E-mail: Leslie.Goodbody@arb.ca.gov

- c. The Grantee Liaison is Jaimie Levin. Correspondence regarding this project shall be directed to:

Jaimie Levin
Director of West Coast Operations
Center for Transportation and the Environment
1960 A University Avenue
Berkeley, California 94704
(510) 851-0625
Email: jaimie@cte.org

2. TIME PERIOD

- 2.1 Performance of work or other expenses billable to ARB under this grant may commence after signing and awarding of this grant. Performance on this grant ends once the Grantee has submitted the final report or if the grant is terminated, whichever is earlier.
- 2.2 Upon completion of the project, the Grantee shall submit a draft final report to the Project Liaison no later than **February 28, 2020** (see Section 6 Reporting).
- 2.3 Final request for payment shall be received by ARB no later than **March 30, 2020** (see Section 4 Grant Disbursements).
- 2.4 The ARB Executive Officer retains the authority to terminate or reduce the dollar amount of this grant if by **June 30, 2018**, 30 percent of project funding has not been expended by the Grantee. In the event of such termination, Section 7 of these provisions shall apply.

- 2.5 The ARB Executive Officer retains the authority to terminate or reduce the dollar amount of this grant if by **October 31, 2018**, 50 percent of project funding has not been expended by the Grantee. In the event of such termination, Section 7 of these provisions shall apply.
- 2.6 The ARB Executive Officer retains the authority to terminate or reduce the dollar amount of this grant if by **December 31, 2018**, 80 percent of project funding has not been expended by the Grantee. In the event of such termination, Section 7 of these provisions shall apply.

3. SCOPE OF WORK

The FCEBCC Project will deploy 20 new 40-foot fuel cell electric transit buses in daily service on regular service routes in Orange, Alameda and Contra Costa Counties. Specifically, 10 of the buses will be deployed in the Orange County Transportation Authority (OCTA) service area, and 10 will be deployed in the Alameda-Contra Costa Transit District (AC Transit) service area. New Flyer will build the buses using fuel cell power systems supplied by Ballard Power Systems. The project will also include installing a new hydrogen refueling facility at the OCTA maintenance yard in Santa Ana, and upgrading AC Transit's existing hydrogen fueling facility at their operation and maintenance yard in Emeryville. Linde will provide, install, and maintain fueling infrastructure and supply the hydrogen required to support the project at both locations. OCTA and AC Transit will execute and manage agreements with New Flyer for the bus procurements and Linde for the hydrogen station build and upgrade. OCTA will upgrade all of its maintenance and service facilities at its Santa Ana operating division to safely work on its fleet of fuel cell buses.

In addition to building and delivering the fuel cell buses, New Flyer will support the deployment of the buses with service and operating manuals, and will collaborate with CTE in developing and implementing a Maintenance Support Plan. CTE will coordinate with AC Transit and OCTA on a training program for mechanics and drivers. New Flyer will install the data collection equipment specified by ARB's third-party data contractor on all new buses. Ballard will build and deliver the fuel cell power systems to New Flyer for integration into the 20 new buses.

Linde will be responsible for the design, engineering, and site construction plans for the new hydrogen fueling facility at OCTA, and the AC Transit hydrogen station upgrade. Linde will also lead all construction, installation, and station commissioning activities. Linde will work with CTE, OCTA, and AC Transit to develop technical specifications and secure permits. OCTA will take the lead, with support from CTE, in completing the necessary facility upgrades at the Santa Ana maintenance facility in advance of hydrogen station equipment

delivery. CTE will provide hydrogen fueling facility training to employees and first responders at both facilities.

AC Transit and OCTA will own and operate the buses and hydrogen infrastructure and will continue to maintain the hydrogen stations and deploy the vehicles in daily transit service for the useful life of the equipment. The Grantee, CTE, will be responsible for program administration and project and budget oversight, and will act as the technical project manager. In this capacity, CTE will collaborate with Transworld Associates, LLC (TWA) and Byrne Zero Emission, LLC (BZE) in completing technical reviews of fuel cell bus and fueling station specifications, ensuring adherence to quality assurance and quality control (QA/QC) requirements, performing bus and station inspections, and providing training assistance and ongoing operational support.

Additional details are in Exhibit B of this Grant Agreement and Exhibit D Grantee Application Package.

- 3.1 General responsibilities of ARB include the following:
 - a. Participation in regular meetings with Grantee to discuss project refinements and guide the administration of the project.
 - b. Reviewing and approving project deliverables and milestones associated with reimbursement provided by Grantee, such as permitting, infrastructure design, construction and installation, vehicle and equipment procurement, vehicle deployment and on-going operation, data collection and analysis.
 - c. Review and approve or disapprove all grant disbursement requests (Form MSCD/ISB-90) and distribute funds to Grantee.
 - d. Provide project oversight in conjunction with Grantee.
 - e. Ensure compliance with applicable requirements of:
 - i. Fiscal Year 2016-2017 Funding Plan for the Low Carbon Transportation and Fuels Investments and Air Quality Improvement Program (FY 2016-17 Funding Plan)
 - ii. Grant Solicitation for Zero-Emission Truck and Bus Pilot Commercial Deployment Projects
- 3.2 Grantee's responsibilities include all CEQA requirements, project development, project administration, project reporting, including but not limited to the following tasks:
 - a. Ensuring that CEQA requirements are fulfilled.
 - b. Participation by Grantee and key project personnel in an initial meeting with ARB staff before work on the project begins. The purpose of the initial meeting will be to discuss the overall plan, details for performing the tasks, the project schedule, and any issues that may need to be addressed. Grantee and key personnel will also participate in meetings to discuss progress to be held at least quarterly beginning three months after the initial meeting. Additional meetings may be scheduled at the sole discretion of the ARB Project Liaison.

- c. Submitting numbered status reports accompanying grant disbursement requests to ARB at least every three months, but may submit on a monthly basis if necessary for more frequent invoicing with prior ARB approval. These reports must be approved by ARB and must contain the following, at a minimum, in either Microsoft Word or PDF, as a single electronic file:
 - i. Project Status Report number, title of project, name of Grantee, date of submission, and project grant number.
 - ii. Summary of work completed since last progress report, noting progress toward completion of tasks and milestones identified in the work plan.
 - iii. Statement of work expected to be completed by the next progress report.
 - iv. Notification of problems encountered and an assessment of their effects on the project's outcomes.
 - v. Data collected from vehicles and equipment since the last data reporting, as deemed necessary by ARB or its designated third-party data analysis provider.
 - vi. Data collected from the hydrogen fueling stations, hydrogen production, and use of renewable resources, as specified in this Grant Agreement.
 - vii. Itemized invoice showing all costs for which reimbursement is being requested.
 - viii. Documentation of earned interest generation and expenditure.
 - ix. Any deliverables associated with completed tasks included in the status report.
 - x. Discussion of the project's adherence to the project timeline.
- d. Notifying Project Liaison of any change in key project personnel identified in Exhibit B, Attachment IV within one month of the change.
- e. Submitting a final report at the end of the project. The final report must include:
 - i. A description of the project's goals and objectives, methods, results of the pilot project, and future application and expansion of the technology within the pilot project fleet and adoption by similar fleets.
 - ii. A description of outreach activities conducted to showcase the technology and encourage adoption of the technology beyond the project fleet.
 - iii. A discussion of the potential for increasing production and the associated cost reductions that could be achieved through economies of scale.
 - iv. An update on prospects for adapting the technology to other heavy duty applications and long-haul applications, including barriers and challenges.
 - v. Additional analysis and considerations as requested by ARB during the term of the grant agreement.
- f. Acquiring, delivering and commissioning 20 fuel cell buses. The Grantee will:
 - i. Assist AC Transit and OCTA in working with New Flyer to develop the technical specifications and negotiating commercial terms for the new buses.

- ii. Track progress and report on the status of:
 1. bus procurement contracts and notices to proceed between OCTA and New Flyer, and AC Transit and New Flyer;
 2. FTA New Model Bus Testing (Altoona testing) certification for New Flyer's Ballard-powered 40-foot Fuel Cell Bus (XHE40 Xcelsior Fuel Cell bus);
 3. New Flyer's build of first two fuel cell buses;
 4. Inspection, acceptance by and delivery of first two buses to AC Transit and OCTA; and
 5. New Flyer's build of remaining 18 buses and delivery to AC Transit and OCTA, including final acceptance.
- iii. Oversee in-plant inspections during build of first two buses to ensure adherence with pre-established AC Transit and OCTA technical specifications, and during build of remaining 18 buses to ensure adherence to specifications, Buy-America requirements, and QA/QC standards.
- iv. Assist New Flyer with development of Maintenance Support Plan, and coordinate with AC Transit and OCTA on establishing and executing training programs for mechanics and drivers.
- v. Ensure that ARB-approved data collection equipment is installed on all 20 fuel cell buses funded under this project and on a representative number of baseline buses (i.e., conventionally fueled (diesel or CNG) buses operating on similar service routes as the fuel cell buses at AC Transit and OCTA).
- vi. Coordinate with ARB's third-party data analysis contractor on data collection and reporting requirements for the 20 fuel cell buses and the baseline buses, as required by ARB.
- g. AC Transit Hydrogen Station improvements, including all work necessary to upgrade the existing hydrogen station in Emeryville for efficiency and faster refueling. The Grantee will:
 - i. Assist AC Transit in finalizing technical specifications and terms for the procurement and service agreement with Linde.
 - ii. Coordinate station kick-off meeting to review scope, schedule, budget, roles and responsibilities.
 - iii. Track progress of station design work conducted by Linde, including architectural and engineering plans and drawings, from initiation to final review, to approvals and scheduling.
 - iv. Support AC Transit, as necessary, in obtaining all permits and approvals required to begin the station upgrade.
 - v. Track progress and report on the following:
 1. Procurement and manufacture of station equipment and components by Linde, and delivery to AC Transit site; and
 2. Completion of AC Transit site preparation and hydrogen station equipment installation, including installing a new higher –capacity compressor, extending hydrogen pipelines to new location, relocating

- an existing dispenser and installing a new dispenser, installing fueling canopy, and extending fueling island.
 - vi. Support AC Transit and Linde in the installation and testing of all new hydrogen station equipment, including compressor, dispensers, control systems, and high-pressure lines; hydrogen purity testing; and equipment calibration as the final step in commissioning.
 - vii. Verify that the hydrogen station meets the requirements detailed in Appendix C of the Zero-Emission Truck and Bus Pilot Commercial Deployment Project Solicitation (Exhibit C).
 - viii. Coordinate and organize training sessions with Linde, AC Transit and local first responders to ensure that all appropriate AC Transit staff and first responders are trained on hydrogen station safety systems and the safe operation and maintenance of the station.
- h. OCTA facility upgrades, including all site work at the OCTA fueling and maintenance yard necessary to service and maintain the fuel cell buses, and prepare the site for installation of the hydrogen fueling once delivered. The Grantee will:
- i. Support OCTA and track progress and report on securing a design and engineering services contract.
 - ii. Support OCTA with and report on the following:
 - 1. coordinating facility upgrade kick-off meeting;
 - 2. obtaining all permits required to begin site construction activities (detailed in Appendix E of Exhibit D); and
 - 3. designing, engineering, constructing and installing electrical, communication and water services, the hydrogen gas detection system, and the improved ventilation system.
 - iii. Coordinate and organize training sessions with Linde, OCTA, local first responders to ensure that all appropriate OCTA staff and first responders are trained on all hydrogen station and facility safety systems and on safe bus maintenance. Additional training will occur during commissioning of the hydrogen fueling station (as discussed below).
- i. OCTA hydrogen station design, installation and commissioning. The Grantee will:
- i. Assist OCTA in finalizing technical specifications and terms for the procurement and service agreement with Linde.
 - ii. Coordinate station kick-off meeting at which scope, schedule, budget, roles and responsibilities will be reviewed.
 - iii. Track and report on progress of station design work conducted by Linde, including architectural and engineering plans and drawings, from initial to final reviews and including approvals and construction scheduling.
 - iv. Support OCTA, as necessary, in obtaining all permits and approvals required to begin the station installation (detailed in Appendix E of Exhibit D).

- v. Track progress and report on the following:
 - 1. Procurement and manufacture of station equipment and components by Linde, and delivery to OCTA facility; and
 - 2. Completion of station construction and installation by Linde including all civil, mechanical and electrical work, and preparation for station commissioning.
- vi. Support Linde and OCTA in testing storage, compression, and dispensing equipment, control systems and high pressure lines, conduct purity tests, and test and adjust station calibration upon arrival of the first fuel cell buses.
- vii. Verify that the hydrogen station meets the requirements detailed in Appendix C of the Solicitation (Exhibit C).
- viii. Coordinate and organize training sessions with Linde, OCTA and local first responders to ensure that all appropriate OCTA staff and first responders are trained on hydrogen station safety systems and the safe operation and maintenance of the station.
- j. Deployment of New Flyer-Ballard Fuel Cell buses (XHE40) at AC Transit and OCTA into regular daily transit service, including refueling, operation and maintenance of buses and hydrogen fueling stations, and data collection. The Grantee will:
 - i. Collaborate with New Flyer, AC Transit and OCTA on defining metrics for evaluating bus performance.
 - ii. Collaborate with all project team members to collect operations and maintenance data from the vehicles and fueling stations.
 - iii. Ensure that Linde provides all necessary maintenance and technical support for the fueling stations for optimal uptime and provision of hydrogen fuel.
 - iv. Ensure that the Renewable Energy Certificates associated with the biogas that is attributed to the production of hydrogen dispensed at the OCTA and AC Transit hydrogen stations for the purpose of satisfying the 33 percent renewable requirement meets the conditions outlined in the October 23, 2009, letter from ARB to Linde (Exhibit E).
 - v. Ensure that Linde, OCTA, and AC Transit have an established service and fuel supply plan that will minimize station downtime.
 - vi. Assist AC Transit and OCTA providing guidance on and establishing training programs for:
 - 1. Bus and station operations;
 - 2. Ongoing in-service operations;
 - 3. Maintenance practices and procedures; and
 - 4. Vehicle performance data collection.
 - vii. Assist AC Transit and OCTA in establishing good service and maintenance practices, defining protocols and procedures, providing continued support and guidance for daily operations, setting up ongoing training curriculum for OCTA staff, and collecting fueling station data.

- viii. Ensure that ARB-approved data collection devices are purchased and installed on all project buses as well as representative baseline buses. Buses to be used for baseline data collection will be subject to ARB approval.
- ix. Work with ARB's third-party data collection and analysis contractor to ensure that all data collected per the specifications of ARB's agreement with the third-party data contractor is made available to the data analysis contractor for inclusion in quarterly status reports and the final report. Note that when this grant agreement is signed by the parties, ARB had not yet entered into a contract with a third-party data contractor. In addition, all FCEBCC project buses will be equipped with New Flyer's data collection system and real-time telematics. Therefore, the Grantee will collaborate with the ARB Project Liaison on all data collection parameters, timing, and data transmittal. In the event that a contract is in place for data collection and analysis, the Grantee must be flexible in scheduling data transmittal to the ARB Project Liaison or the third-party contractor and must be amenable to the installation of ARB-specified data collection devices. All data collected will be included in the final report.

4. FISCAL ADMINISTRATION

Budget

- 4.1 The maximum amount of this grant is \$22,347,502. Under no circumstance will ARB reimburse the Grantee for more than this amount. A written Grant Agreement amendment is required whenever there is a change to the amount of this grant.
- 4.2 The budget for this project is shown in Exhibit B, Attachment I. Grant Disbursement Requests for pilot commercial deployment funds and administrative funds shall not exceed the corresponding grant amount.
- 4.3 The total funding may only be reallocated in the event that the Grantee requests less administrative funding than the amount stated in the budget.

Grant Disbursements

- 4.4 Requests for payment shall be made with the Grant Disbursement Request Form (Form MSCD/ISB-90) and conform to the instructions identified in the Air Quality Improvement Program and Low Carbon Transportation GGRF Investments Zero-Emission Truck and Bus Pilot Commercial Deployment Project Solicitation (Solicitation). Grant payments shall be made only for reasonable costs incurred by the Grantee and (with the exception of the first disbursement of administration

funds) only when the Grantee has submitted a Grant Disbursement Request Form, milestones stipulated in Exhibit B, Attachment II and the instructions found in the Solicitation have been accomplished, documentation of accomplishment has been provided to ARB in the form of the Status Report, and any associated deliverables (if applicable) have been provided to ARB. ARB will have sole discretion to accelerate the timeline for allowable disbursements of administration and project funds identified in Exhibit B, Attachment II (with the exception of the final project administration disbursement), necessary to assure the goals of the project are met.

- 4.5 Grant payments are subject to ARB's approval of Status Reports and any accompanying deliverables (see Section 6 Reporting). A payment will not be made if the ARB Project Liaison deems that a milestone has not been accomplished or documented, a deliverable meeting specification has not been provided, claimed expenses are not documented, not valid per the budget, or not reasonable, or the Grantee has not met other terms of the grant.

The Chief of the Mobile Source Control Division or designee of ARB may review the Project Liaison's approval or disapproval of a Grant Disbursement Request. No reimbursement will be made for expenses that, in the judgment of the Division Chief of the Mobile Source Control Division, are not reasonable or do not comply with the Grant Agreement.

- 4.6 The Grantee shall mail Grant Disbursement Requests to the Project Liaison.
- 4.7 ARB retains the right to withhold payment of ten percent of administrative funds until completion of all work and submission of a Final Report to ARB, as identified in the Solicitation. It is the Grantee's responsibility to submit a Grant Disbursement Request for this final disbursement of funds.

- 4.8 ARB shall disburse funds in accordance with the California Prompt Payment Act, Government Code, Section 927, et seq.

Earned Interest

- 4.9 Earned interest means any interest earnings generated from grant funds held by Grantee in interest-bearing accounts.
- 4.10 Grant funds are not required to be held in an interest-bearing account. However, if interest is earned by Grantee on grant funds, the earnings must be reported to ARB. All interest income on the Pilot Project funds must be reinvested in and used by the FCEBCC Project or returned to ARB. Interest earned that is reinvested in the FCEBCC Project is not included as part of the Total Grant Amount from ARB. Grantee is responsible for reporting to ARB all project expenditures funded with interest earned on the FCEBCC Project funds.

- 4.11 Grantee must maintain accounting records (e.g., general ledger) that tracks interest earned, expended, or returned on the FCEBCC Project funds, as follows:
 - a. The calculation of interest must be based on an average daily balance or some other reasonable and demonstrable method.
 - b. Interest earned must ensure that it is separately identifiable from interest earned on non-FCEBCC Project funds.
 - c. The methodology for calculating earned interest must be consistent with how it is calculated for Grantee's other fiscal programs.
 - d. Earned interest must be fully expended or returned to ARB by completion of the project, submittal of the Final Report, or by January 31, 2019, whichever comes first.
- 4.12 Documentation of interest earned on the grant funds and expenditures made on those funds or returned to ARB must be:
 - a. Retained for a minimum of three years after it is generated.
 - b. Provided to ARB in Quarterly Status Reports and a Final Report.

Oversight and Accountability

- 4.13 The Grantee shall comply with all oversight responsibilities identified in the Solicitation and this Grant Agreement.
- 4.14 ARB or its designee reserves the right to audit at any time during the duration of this grant the Grantee's costs of performing the grant and to refuse payment of any reimbursable costs or expenses that in the opinion of ARB or its designee are unsubstantiated or unverified. The Grantee shall cooperate with ARB or its designee including, but not limited to, promptly providing all information and documents requested, such as all financial records, documents, and other information pertaining to reimbursable costs, and any matching costs and expenses.
- 4.15 The Grantee shall retain all financial records referred to above and provide them for examination and audit by the State for three years after final payment under this grant.
- 4.16 The grantee shall develop and maintain accounting procedures to track reservation and expenditures by grant award, fiscal year, and of all funding sources.
- 4.17 The Grantee shall store all records in a secured and safe storage facility that maintains confidentiality and provides fire and natural disaster protection (see Section 9). Files must be retained during the term of the Grant Agreement plus 3 years.

- 4.18 ARB or its designee may recoup funds that were received based upon misinformation or fraud, or for which a Grantee, manufacturer (including truck or bus manufacturer), technology provider, or vehicle purchaser is in significant or continual non-compliance with the terms of this grant or State law. ARB also reserves the right to prohibit any entity from participating in the Pilot Commercial Deployment Projects, due to non-compliance with project requirements

5. PROJECT MONITORING

Meetings

- 5.1 Initial meeting: A meeting will be held between key project personnel and ARB staff before work on the project begins. The purpose of the first meeting will be to discuss the overall plan, details of performing the tasks, the project schedule, and any issues that may need to be resolved.

Review meetings: Meetings to discuss progress must be held at least quarterly beginning three months after the initial meeting. Additional meetings may be scheduled at the sole discretion of the Project Liaison. Such meetings may be conducted by phone, if deemed appropriate by the Project Liaison.

Technical Monitoring

- 5.2 Any changes in the scope or schedule for the project shall require the prior written approval of the ARB Project Liaison.
- 5.3 The Grantee shall notify the ARB Project Liaison and Grant Coordinator in writing, immediately if any circumstances arise (technical, economic, or otherwise), which might place completion of the project in jeopardy. The Grantee shall also make such notification if there is a change in key project personnel (see Exhibit B, Attachment IV).
- 5.4 The Grantee shall notify the Project Liaison if the project technology provider will pursue FTA Altoona Testing, Federal Motor Vehicle Safety Standard testing, or any other certifications during the term of this agreement and all documentation in support of the certification must be submitted to the Project Liaison concurrently with the certification submittal.
- 5.5 In addition to Status Reports (discussed in Section 6 Reporting), the Grantee shall provide information requested by the Project Liaison that is needed to assess progress in completing tasks and meeting the objectives of the project.
- 5.6 Any change in budget allocations, re-definition of deliverables, or extension of the project schedule must be requested in writing to the ARB Project Liaison and approved by ARB, in its sole discretion.

6. REPORTING

Status Reports

- 6.1 The Grantee shall submit Status Reports at a minimum of three-month intervals. The Status Reports shall be provided in a format agreed upon between the ARB Project Liaison and the Grantee and meet the requirements of the Solicitation.
- 6.2 Every Grant Disbursement Request Form (Form Number MSCD/ISB-90) shall be accompanied by a Status Report that meets the requirements of Section 3.2.c of these provisions and documents the completion of a milestone specified in Exhibit B, Attachment II.
- 6.3 If the project is behind schedule, the Status Reports must contain an explanation of reasons and how the Grantee plans to resume the schedule.

Final Report

- 6.4 When the project is complete, the Grantee shall submit a draft Final Report. The draft Final Report must be submitted to ARB in an appropriate format agreed upon between the ARB Project Liaison and the Grantee. The Final Report must meet the requirements of the Solicitation and Section 3.2.e of these provisions. Upon approval of the draft Final Report by the Project Liaison, the Grantee shall provide a written copy of the final version, plus an electronic file.

7. TERMINATION AND SUSPENSION OF PAYMENTS

- 7.1 ARB reserves the right to terminate this grant upon thirty days' written notice to the Grantee, if ARB determines that the project has not progressed satisfactorily during the previous three months and the Grantee and ARB have been unable to agree on modifications. In case of early termination, the Grantee will submit a Grant Disbursement Request Form, a Status Report covering activities up to, and including, the termination date and following the requirements in Sections 4 and 6 of these provisions. Upon receipt of the Grant Disbursement Request Form, Status Report, and all proprietary information and intellectual property generated as part of this grant agreement has been relinquished to ARB, a final payment will be made to the Grantee. This payment shall be for all ARB-approved, actually incurred costs that in the opinion of ARB are justified. However, the total amount paid shall not exceed the total grant amount.
- 7.2 ARB reserves the right to issue a grant suspension order in the event that a dispute should arise. The grant suspension order will be in effect until the dispute has been resolved or the grant has been terminated. If the Grantee chooses to continue work on the project after receiving a grant suspension order, the Grantee will not be reimbursed for any expenditure incurred during the

suspension in the event ARB terminates the grant. If ARB rescinds the suspension order and does not terminate the grant, ARB will reimburse the Grantee for any expenses incurred during the suspension that are reimbursable in accordance with the terms of the grant.

8. CONTINGENCY PROVISION

- 8.1 In the event this grant is terminated for whatever reason, the ARB Executive Officer or designee reserves the right in his or her sole discretion to award a grant to the next highest scored applicant and if an agreement cannot be reached, to the next applicant(s) until an agreement is reached. If ARB is unable to award a grant under these circumstances, ARB may award a grant to other projects.

9. PROJECT RECORDS

Grantee Record

- 9.1 As further described below, project records include but are not limited to Grantee, financial, and other records. All project records must be retained for a period of three (3) years after final payment under this Grant. All project records are subject to audit pursuant to Section 10.27 of this Grant Agreement. Upon completion of the third year of record retention, the Grantee shall submit all project records to ARB.
- 9.2 The Grantee shall retain a file for the Zero-Emission Truck and Bus Pilot Commercial Deployment Project containing:
- a. Original executed copy of the Zero-Emission Truck and Bus Pilot Commercial Deployment Project Grant Agreement and Grant Agreement Amendments (if applicable).
 - b. Copies of Grant Disbursement Request Forms.
 - c. Documentation of earned interest generation and expenditure.

Financial Record

- 9.3 Without limitation of the requirement to maintain project accounts in accordance with generally accepted accounting principles, the Grantee must:
- a. Establish an official file for the Zero-Emission Truck and Bus Pilot Commercial Deployment Project that will adequately document all significant actions relative to the project.
 - b. Establish separate accounts that will adequately and accurately depict all amounts received and expended on the Zero-Emission Truck and Bus Pilot Commercial Deployment Project.

- c. Establish separate accounts that will adequately and accurately depict all income received that is attributable to the Zero-Emission Truck and Bus Pilot Commercial Deployment Project.
 - d. Establish an accounting system that will adequately depict final total costs of the Zero-Emission Truck and Bus Pilot Commercial Deployment Project, including both direct and indirect costs.
- 9.4 Other records include all deliverables required under Exhibit B, Attachment III, of this Grant Agreement.

10. GENERAL PROVISIONS

- 10.1. **Amendment:** No amendment or variation of the terms of this Grant Agreement shall be valid unless made in writing, signed by the parties and approved as required. No oral understanding or agreement not incorporated in the Grant Agreement is binding on any of the parties.
- 10.2. **Assignment:** This grant is not assignable by the Grantee, either in whole or in part, without the consent of ARB.
- 10.3. **Compliance with law, regulations, etc.:** The Grantee agrees that it will, at all times, comply with and require its contractors and subcontractors to comply with all applicable federal and State laws, rules, guidelines, regulations, and requirements.
- 10.4. **Computer software:** The Grantee certifies that it has appropriate systems and controls in place to ensure that State funds will not be used in the performance of this Grant Agreement for the acquisition, operation or maintenance of computer software in violation of copyright laws.
- 10.5. **Conflict of interest:** The Grantee certifies that it is in compliance with applicable State and/or federal conflict of interest laws.
- 10.6. **Disputes:** The Grantee shall continue with the responsibilities under this Grant Agreement during any dispute. Grantee staff or management may work in good faith with ARB staff or management to resolve any disagreements or conflicts arising from implementation of this Grant Agreement. However, any disagreements that cannot be resolved at the management level within 30 days of when the issue is first raised with ARB staff shall be subject to resolution by the ARB Executive Officer, or his designated representative. Nothing contained in this paragraph is intended to limit any rights or remedies that the parties may have under law.
- 10.7. **Environmental justice:** In the performance of this Grant Agreement, the Grantee shall conduct its programs, policies, and activities that substantially affect human health or the environment in a manner that ensures the fair

treatment of people of all races, cultures, and income levels, including minority populations and low-income population of the State.

- 10.8. **Fiscal management systems and accounting standards:** The Grantee agrees that, at a minimum, its fiscal control and accounting procedures will be sufficient to permit tracing of grant funds to a level of expenditure adequate to establish that such funds have not been used in violation of State law or this Grant Agreement. Unless otherwise prohibited by State or local law, the Grantee further agrees that it will maintain separate Project accounts in accordance with generally accepted accounting principles.
- 10.9. **Force majeure:** Neither ARB nor the Grantee shall be liable for or deemed to be in default for any delay or failure in performance under this Grant Agreement or interruption of services resulting, directly or indirectly, from acts of God, enemy or hostile governmental action, civil commotion, strikes, lockouts, labor disputes, fire or other casualty, etc.
- 10.10. **Governing law and venue:** This grant is governed by and shall be interpreted in accordance with the laws of the State of California. ARB and the Grantee hereby agree that any action arising out of this Grant Agreement shall be filed and maintained in the Superior Court in and for the County of Sacramento, California, or in the United States District Court in and for the Eastern District of California. The Grantee hereby waives any existing sovereign immunity for the purposes of this Grant Agreement.
- 10.11. **Indemnification:** The Grantee agrees to indemnify, defend and hold harmless the State and the Board and its officers, employees, agents, representatives, and successors-in-interest against any and all liability, loss, and expense, including reasonable attorneys' fees, from any and all claims for injury or damages arising out of the performance by the Grantee, and out of the operation of equipment that is purchased with funds from this Grant Award.
- 10.12. **Grantee's responsibility for work:** The Grantee shall be responsible for work and for persons or entities engaged in work, including, but not limited to, contractors, subcontractors, suppliers, and providers of services. The Grantee shall be responsible for any and all disputes arising out of its contract for work on the Project, including but not limited to payment disputes with contractors, subcontractors, and providers of services. The State will not mediate disputes between the Grantee and any other entity concerning responsibility for performance of work.
- 10.13. **Independent actor:** The Grantee, and its agents and employees, if any, in their performance of this Grant Agreement, shall act in an independent capacity and not as officers, employees or agents of ARB.

- 10.14. **Nondiscrimination:** During the performance of this Grant Agreement, the Grantee and its contractors shall not unlawfully discriminate against, harass, or allow harassment against any employee or applicant for employment because of sex, race, religion, color, national origin, ancestry, disability, sexual orientation, medical condition, marital status, age (over 40) or allow denial of family-care leave, medical-care leave, or pregnancy-disability leave. The Grantee and its contractors shall ensure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination and harassment.
- 10.15. **No third party rights:** The parties to this Grant Agreement do not create rights in, or grant remedies to, any third party as a beneficiary of this Grant Agreement, or of any duty, covenant, obligation or undertaking establish herein.
- 10.16. **Prevailing wages and labor compliance:** If applicable, the Grantee agrees to be bound by all the provisions of State Labor Code Section 1771 regarding prevailing wages. If applicable, the Grantee shall monitor all agreements subject to reimbursement from this Grant Agreement to ensure that the prevailing wage provisions of State Labor Code Section 1771 are being met.
- 10.17. **Professionals:** For projects involving installation or construction services, the Grantee agrees that only licensed professionals will be used to perform services under this Grant Agreement where such services are called for and licensed professionals are required for those services under State law.
- 10.18. **Severability:** If a court of competent jurisdiction holds any provision of this Grant Agreement to be illegal, unenforceable or invalid in whole or in part for any reason, the validity and enforceability of the remaining provisions, or portions of those provisions, will not be affected.
- 10.19. **Termination:** ARB may terminate this Grant Agreement by written notice at any time prior to completion of projects funded by this Grant Agreement, upon violation by the Grantee of any material provision after such violation has been called to the attention of the Grantee and after failure of the Grantee to bring itself into compliance with the provisions of this Grant Agreement.
- 10.20. **Timeliness:** Time is of the essence in this Grant Agreement. Grantee shall proceed with and complete the Project in an expeditious manner.
- 10.21. **Waiver of Rights:** Any waiver of rights with respect to a default or other matter arising under the Grant Agreement at any time by either party shall not be considered a waiver of rights with respect to any other default or matter. Any rights and remedies of the State provided for in this Grant Agreement are in addition to any other rights and remedies provided by law.
- 10.22. **Availability of funds:** ARB's obligations under this Grant Agreement are contingent upon the availability of funds. In the event funds are not available, the

State shall have no liability to pay any funds whatsoever to the Grantee or to furnish any other considerations under this Grant Agreement.

- 10.23. **Confidentiality:** No record that has been designated as confidential by ARB, or is the subject of a pending application of confidentiality, shall be disclosed by the Grantee. Any confidential information or data submitted to ARB by the Grantee may be shared with other divisions within ARB.
- 10.24. **Personally Identifiable Information:** Information or data that personally identifies an individual or individuals is confidential in accordance with California Civil Code sections 1798, et seq. and other relevant State or Federal statutes and regulations. The Grantee shall safeguard all such information or data which comes into their possession under this agreement in perpetuity, and shall not release or publish any such information or data.
- 10.25. **Ownership:** All information or data received or generated by the Grantee under this agreement shall become the property of ARB. No information or data received or generated under this agreement shall be released without ARB's approval.
- 10.26. **Audit:** Grantee agrees that ARB, the Department of General Services, Department of Finance, the Bureau of State Audits, or their designated representative shall have the right to review and to copy any records and supporting documentation pertaining to the performance of this Grant and all State funds received. Grantee agrees to maintain such records for possible audit for a minimum of three (3) years after the term of this Grant is completed, unless a longer period of records retention is stipulated. Grantee agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records. Further, Grantee agrees to include similar right of the State to audit records and interview staff in any Grant related to performance of this Agreement.

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EXHIBIT B

Work Statement

Budget Summary (Attachment I)

Project Milestones and Disbursement Schedule (Attachment II)

Project Schedule (Attachment III)

Key Project Personnel (Attachment IV)

EXHIBIT B, Attachment I

Budget Summary

Grantee: Center for Transportation and the Environment Grant No.: G16-ZBUS-01

Project: Fuel Cell Electric Bus Commercialization Consortium (FCEBCC) Project

Total Costs & Funding

Costs	Grant	Applicant Match Funding		Total
	Cash	Cash	In-Kind	
1. Pilot Commercial Deployment Funds	\$21,782,965	\$21,759,118	\$1,393,239	\$44,935,322
2. Administrative Funds ¹	\$564,537	\$0	\$0	\$564,537
Total	\$22,347,502	\$21,759,118	\$1,393,239	\$45,499,859

¹Administrative funds may not exceed 5% of ARB-awarded funds and can only be used for administrative purposes.

Disbursement of Funds:

Pilot Commercial Deployment Funding

The Grantee shall receive funds in accordance with the Fiscal Year Low Carbon Transportation GGRF Investments: Zero-Emission Truck and Bus Pilot Commercial Deployment Projects Solicitation.

Project Administration

The Grantee shall receive project administration funding in accordance with the Low Carbon Transportation GGRF Investments: Zero-Emission Truck and Bus Pilot Commercial Deployment Projects Solicitation.

EXHIBIT B, Attachment II

Project Milestones and Disbursement Schedule

Grantee: Center for Transportation and the Environment Grant No.: G16-ZBUS-01

Project: Fuel Cell Electric Bus Commercialization Consortium (FCEBCC) Project

Milestone	Task Description	Project Funding	
		Project Funds	Administrative Funds
Task 1	Administration and Project Management	\$0	\$564,537
1	Kick-off meetings: Task 1.3	\$0	\$10,000
2	Recurring Milestone: Subcontractor agreements: Task 1.2, not to exceed Milestone 2 total.	\$0	\$100,000
3	Recurring Milestone: Project Management Plans: Task 1.4, not to exceed Milestone 3 total.	\$0	\$25,000
4	Recurring Milestone: Quarterly meetings and status updates: Tasks 1.5 and 1.6, not to exceed Milestone 4 total.	\$0	\$394,537
31	Completion of Draft Final Project Report: Task 1.7.1	\$0	\$0
32	Completion of Final Project Report: Task 1.7.2.	\$0	\$35,000

Milestone	Task Description	Project Funding	
		Project Funds	Administrative Funds
Task 2	<i>Bus Acquisition, Build, Delivery and Commissioning</i>	\$11,694,678	\$0
5	Recurring Milestone: Develop technical specifications and commercial terms for buses, and execute final procurement contract and notices to proceed: Completion of Tasks 2.1, 2.2 and 2.3, not to exceed Milestone 5 total.	CTE: \$47,000 TWA: \$38,500 BZE: \$1,300	\$0
6	Completion of required Altoona testing. Completion of Task 2.1.2	\$0	\$0
7	Procure supplies for bus builds. Completion of Task 2.4	\$0	\$0
8.1	Recurring Milestone: Bus build including installation of axles and verification of delivery of fuel cell and hydrogen storage systems to New Flyer: Task 2.5.1, 2.5.2, 2.5.3, 2.5.4, to be disbursed at \$200,000 per bus not to exceed Milestone 8.1 total.	NF: \$4,000,000	\$0
8.2	Recurring Milestone: In-plant inspections of first two buses and remaining 18 buses: Completion of technical oversight aspect of Tasks 2.5.1, 2.5.2, 2.5.3, 2.5.4, not to exceed Milestone 8.2 total.	CTE: \$57,000 TWA: \$102,600 BZE: \$15,000	\$0
9	Recurring Milestone: Acceptance and Shipping of buses; Task 2.6.1, 2.6.2, 2.6.3, 2.6.4, not to exceed Milestone 9 total.	CTE: \$55,000 TWA: \$38,500 BZE: \$2,700	\$0

Milestone	Task Description	Project Funding	
		Project Funds	Administrative Funds
10.1	Recurring Milestone: Delivery and initial acceptance of first two buses and remaining 18 for AC Transit and OCTA; Tasks 2.7.1, 2.7.2, 2.7.3, 2.7.4 to be disbursed at \$171,205 per bus for AC Transit and \$288,795 per bus for OCTA, ¹ not to exceed Milestone 10.1 total.	NF: \$4,600,000	\$0
10.2	Recurring Milestone: Initial acceptance work of Tasks 2.7.1, 2.7.2, 2.7.3, 2.7.4, not to exceed Milestone 10.2 total.	CTE: \$53,000 TWA: \$25,700 BZE: \$2,700	\$0
11.1	Recurring Milestone: Final payment for buses upon proof of 40-hours of in-service performance without problems; Task 2.8.1, 2.8.2, 2.8.3, 2.8.4, to be disbursed at \$110,120 per bus for AC Transit and \$145,005 per bus for OCTA, not to exceed Milestone 11.1 total.	NF: \$2,551,250	\$0
11.2	Recurring Milestone: Formal acceptance evaluation associated with Task 2.8.1, 2.8.2, 2.8.3, 2.8.4, not to exceed Milestone 11.2 total.	TWA: \$25,700 BZE: \$2,700	\$0
12	Recurring Milestone: Support and Training Tasks 2.9, not to exceed Milestone 12.	CTE: \$47,828 TWA: \$25,640 BZE: \$2,560	\$0

¹ Different disbursement amounts in Milestones 10.1 and 11.1 are required to account for different match amounts provided to and by each transit agency, and different local sales taxes. The purchase price for each bus before tax is \$1,235,000, as specified in the application.

Milestone	Task Description	Project Funding	
		Project Funds	Administrative Funds
Task 3	OCTA Hydrogen Station	\$5,651,847	\$0
13	Recurring Milestone: Procurement and service agreement with Linde, and fueling station kickoff meeting: Tasks 3.1 and 3.2, not to exceed Milestone 13.	CTE: \$26,000	\$0
14	Recurring Milestone: Obtain permits and Categorical Exemption. Task 3.5, not to exceed Milestone 14.	CTE: \$25,000 OCTA: \$14,000	\$0
15.1	Site and station design plans: Linde completes Task 3.3.1.	Linde: \$1,620,000	\$0
15.2	Recurring Milestone: Work with Linde on completing Task 3.3, including all subtasks, not to exceed Milestone 15.2 total.	CTE: \$25,000 OCTA: \$71,000 BZE: \$5,400	\$0
16.1	Completed Equipment Drawings: Task 3.4.2.	Linde: \$463,000	\$0
16.2	Equipment Manufactured and Shipped: Task 3.4.4	Linde: \$926,000	\$0
16.3	Fueling Equipment Installed: Task 3.6.4	Linde: \$1,160,000	\$0
16.4	Recurring Milestone: Technical support on Tasks 3.4 and 3.6, including all subtasks, not to exceed Milestone 16.4 total.	CTE: \$20,000 OCTA: \$625,541	\$0
17.1	Recurring Milestone: Equipment installation and station commissioning: Task 3.7, not to exceed Milestone 17.1.	CTE: \$15,000	\$0
17.2	Recurring Milestone: OCTA station training sessions. Task 3.8, not to exceed Milestone 17.2.	CTE: \$38,374 BZE: \$8,800	\$0

Milestone	Task Description	Project Funding	
		Project Funds	Administrative Funds
17.3	Station commissioned and all training completed: Completion of Task 3.8.	Linde: \$608,732	\$0
Task 4	AC Transit Hydrogen Station Upgrades	\$3,790,589	\$0
18	Recurring Milestone: Procurement and service agreement with Linde, and fueling station kickoff meeting: Tasks 4.1 and 4.2, not to exceed Milestone 18.	CTE: \$22,000	\$0
19	Recurring Milestone: Permitting: Task 4.5, not to exceed Milestone 19 total.	CTE: \$17,000 ACT: \$21,000	\$0
20.1	Site and station design plans: Linde completes Task 4.3.1.	Linde: \$926,000	\$0
20.2	Recurring Milestone: Work with Linde on completing Task 4.3, including all subtasks, not to exceed Milestone 20.2 total.	CTE: \$16,000 ACT: \$155,000 BZE: \$5,400	\$0
21.1	Completed Equipment Drawings: Task 4.4.2.	Linde: \$265,000	\$0
21.2	Equipment Manufactured and Shipped: Task 4.4.4	Linde: \$529,000	\$0
22	Recurring Milestone: Station construction and site preparation: Tasks 4.4 and 4.6, including all subtasks, not to exceed Milestone 22 total.	CTE: \$10,000 ACT: \$854,000	\$0
23.1	Equipment Installation, Commissioning. Linde completes Task 4.7.1	Linde: \$662,000	\$0
23.2	Recurring Milestone: Project support on Task 4.7, including all subtasks, not to exceed Milestone 23.2 total.	CTE: \$15,000	\$0

Milestone	Task Description	Project Funding	
		Project Funds	Administrative Funds
24.1	Recurring Milestone: AC Transit station training sessions. Task 4.8, including all sub tasks, not to exceed Milestone 24.1.	CTE: \$28,453	\$0
24.2	Linde completes all commissioning activities and training: Task 4.8.	Linde: \$264,736	\$0
Task 5	OCTA Facility Upgrades	\$483,304	\$0
25	Recurring Milestone: Design/Engineering Services contract and kickoff meeting: Tasks 5.1 and 5.2, not to exceed Milestone 25 total.	CTE: \$5,000 OCTA: \$75,000 BZE: \$7,000	\$0
26	Recurring Milestone: Obtain permits: Task 5.4, not to exceed Milestone 26 total.	CTE: \$5,000 OCTA: \$5,000	\$0
27	Recurring Milestone: Utility upgrades (electrical, water, communication) and ventilation system installation: Tasks 5.3 and 5.5, not to exceed Milestone 27 total.	CTE: \$40,000 OCTA: \$325,000	\$0
28	Recurring Milestone: Training on safety systems: Task 5.6, not to exceed Milestone 28 total.	CTE: 7,985 OCTA: \$9,819 BZE: \$3,500	\$0
Task 6	Bus Deployment, Hydrogen Station Operation and Maintenance, and Data Collection	\$162,547	\$0
29	Recurring Milestone: AC Transit and OCTA FCEB operator training, in-service operations, and data collection. Tasks 6.1.1, 6.1.2, 6.1.3, and 6.1.4, not to exceed Milestone 29 total.	CTE: \$93,000 BZE: \$15,000	\$0

Milestone	Task Description	Project Funding	
		Project Funds	Administrative Funds
30	Recurring Milestone: AC Transit and OCTA Hydrogen Station Operations and Data Collection: Task 6, not to exceed Milestone 30 total.	CTE: \$38,147 BZE: \$16,400	\$0
<i>Subtotal of Project Funds and Administrative Funds</i>		\$21,782,965	\$564,537
Grant Total ARB Funding Amount		\$22,347,502	

EXHIBIT B, Attachment III

Project Schedule

Grantee: Center for Transportation and the Environment Grant No.: G16-ZBUS-01

Project: Fuel Cell Electric Bus Commercialization Consortium (FCEBCC) Project

Work Task	Start Date	Completion Date
Task 1 – Administration and Project Management	02/01/2017	03/30/2020
1.1 CARB Grant Agreement		02/01/2017
1.2 Execute Subcontracts – Grantee with support from project team will develop and execute subcontracts for all defined recipients. Grantee and TWA will assist AC Transit and OCTA, respectively, in their negotiations and contract executions with New Flyer, Linde, BAAQMD and SCAQMD. <i>Deliverables: Copies of executed agreements between CTE and AC Transit; CTE and OCTA; AC Transit and New Flyer; AC Transit and Linde; AC Transit and BAAQMD; OCTA and New Flyer; OCTA and Linde; and OCTA and SCAQMD.</i>	02/01/2017	04/24/2017
1.3 Kick-off Meetings – The project team (CTE, AC Transit, OCTA, Linde, New Flyer, BZE and TWA) will meet with ARB and the third-party data analysis provider to discuss project goals and expectations, work plan, roles and responsibilities, details of task performance, communications, schedule, and resolution of issues. <i>Deliverables: Meeting agenda, presentation(s) and minutes.</i>	02/14/2017	02/15/2017
1.4 Project Management Plan – Grantee with support from all project team members will develop, document and distribute the Project Management Plan for this project. The Project Management Plan will include, but be limited to, objectives, workplan, success criteria, assumptions, dependencies, organizational structure, managerial plan process and communication plan, risk management. <i>Deliverable: Copy of Final Project Management Plan</i>	02/16/2017	03/15/2017

Work Task	Start Date	Completion Date
<p>1.5 and 1.6 Quarterly Update Meetings and Status Reports: Grantee will coordinate quarterly project update meetings to discuss progress with the project team. The meetings will follow a defined agenda that will cover project status update, difficulties encountered, upcoming deliverables, pending disbursement requests, and schedule of the next update meeting. Quarterly status reports will include the above information plus progress of the bus and station builds relative to the schedule, any challenges, delays, concerns and/or solutions encountered during the builds and lessons learned, and data collection from project vehicles once deployed and the hydrogen fueling stations once operational. <i>Deliverables: Agendas, presentations, minutes, status reports.</i></p>	04/11/2017	01/07/2020
<p>1.7.1 Draft Final Project Report: At the completion of the project, the Grantee will submit a draft final report to ARB that describes the project's goals and objectives, methods, results of the pilot deployment, future application of the technology, commercialization, expansion and technology transfer prospects, and data analysis. The report will also include a summary of all progress reports, any deliverables committed to in this Grant Agreement, feedback from AC Transit and OCTA staff on bus operation how the project buses compare to baseline buses, feedback from transit agency staff on hydrogen station performance and suggestions for improvement, and any other information required by ARB. <i>Deliverable: Draft Project Report.</i></p>	01/08/2020	02/28/2020
<p>1.7.2 Final Project Report: Upon receipt of comments from ARB on the Draft Project Report, Grantee will prepare and submit to ARB the Final Project Report. <i>Deliverable: Final Project Report and final disbursement request.</i></p>	03/02/2020	03/30/2020

Work Task	Start Date	Completion Date
Task 2 – Bus Build, Delivery and Acceptance	02/01/2017	12/28/2018
2.1 Develop Technical Specifications: Grantee will assist AC Transit and OCTA and work with New Flyer to develop technical specifications for the XHE40 New Flyer-Ballard fuel cell buses, including the collection of power requirements from the existing bus fleet. <i>Deliverable: Copy of Technical Specifications</i>	02/01/2017	01/15/2018
2.1.2 Complete required Altoona Testing: New Flyer will work with FTA and Penn State University to obtain Altoona certification of their XHE40 Ballard fuel cell bus. It is understood that, upon completion of Altoona testing of New Flyer's XHE60 Ballard fuel cell bus and their XHE40 Hydrogenics fuel cell bus, New Flyer's XHE40 Ballard fuel cell bus will only need to undergo a limited partial test to be considered compliant with FTA's New Model Testing requirements. <i>Deliverable: Copy of Altoona test report(s) and certification.</i>	01/15/2018	01/15/2018
2.2 Develop commercial terms for buses: AC Transit, OCTA, and Grantee will develop and negotiate commercial terms for the buses, including working with New Flyer to ensure that the new buses meet FTA's "Buy America" requirements. <i>Deliverable: Copy of commercial terms.</i>	02/01/2017	02/20/2017
2.3 Pre-contract audit and contract execution: AC Transit and OCTA execute final procurement contract with New Flyer then issue Notices to Proceed. TWA and BZE conduct pre-contract factory inspections and quality assurance audit prior to AC Transit and OCTA each issuing Notices to Proceed. <i>Deliverable: Copies of notices to proceed.</i>	02/14/2017	04/24/2017
2.4 Procure supplies for bus builds: New Flyer executes orders and procures all components, equipment, and materials needed to build the buses. AC Transit and OCTA procure add-on equipment to be installed by either New Flyer or transit agencies onto buses in advance of deployment. <i>Deliverables: summary of purchase orders, invoices and agreements.</i>	04/25/2017	08/31/2017

Work Task	Start Date	Completion Date
<p>2.5 Manufacture buses, inspections, and in-plant acceptance: New Flyer will manufacture and assemble all buses at their facilities in Winnipeg, Canada or Crookston, Minnesota, and all buses will meet “Buy America” requirements imposed by U.S. Federal Law. TWA, BZE and CTE, will oversee in-plant inspections of bus and fuel cell production and ensure that all applicable Quality Control and Quality Assurance standards are met for every vehicle. BZE and TWA will perform acceptance inspections of completed buses prior to shipping to the transit agencies. Manufacturing and in-plant inspections will occur in three phases detailed below: <i>Deliverables: updates for quarterly status reports.</i></p>	07/28/2017	10/25/18
<p>2.5.1 and 2.5.2 First two buses: New Flyer builds one bus each for AC Transit and OCTA, and performs tests and modifications, as necessary, to ensure buses meet technical specifications established under Task 2.1. <i>Deliverables: Evidence of axles installed on each bus and fuel cell and hydrogen storage systems for each bus have been delivered to New Flyer.</i></p>	09/01/2017	03/15/2018
<p>2.5.3 Next 9 buses for AC Transit: New Flyer will incorporate information gleaned from the first AC Transit bus build into manufacturing 9 buses for AC Transit. <i>Deliverables: Evidence of axles installed on each bus and fuel cell and hydrogen storage systems for each bus have been delivered to New Flyer.</i></p>	05/04/2018	07/26/2018
<p>2.5.4 Manufacture remaining 9 buses for OCTA: New Flyer will incorporate any new information gleaned from the first OCTA bus build into manufacturing 9 buses for OCTA. <i>Deliverables: Evidence of axles installed on each bus and fuel cell and hydrogen storage systems for each bus have been delivered to New Flyer.</i></p>	08/03/2018	10/25/2018
<p>2.6 Acceptance and Shipping: Buses are evaluated at New Flyer factory by AC Transit and OCTA staff and TWA/BZE consultants for readiness to ship to each transit agency</p>	03/16/2018	11/29/2018

Work Task	Start Date	Completion Date
2.6.1 and 2.6.2 AC Transit (2.6.1) and OCTA (2.6.2) first buses; <i>Deliverables: Completed punch list and shipping documents.</i>	03/16/18	03/22/2018
2.6.3 AC Transit nine additional buses; <i>Deliverables: Completed punch list and shipping documents.</i>	07/06/2018	08/30/2018
2.6.4 OCTA nine additional buses; <i>Deliverables: Completed punch list and shipping documents.</i>	10/05/2018	11/29/2018
2.7 Delivery to and initial acceptance of buses by transit agencies: Upon arrival at the transit agencies, AC Transit and OCTA will initially accept each bus and will begin in-service evaluations required before the buses can be formally transferred (Task 2.8). <i>Deliverables: documentation confirming inspections, shipping, acceptance and transfer for each bus.</i>	04/06/2018	12/28/2018
2.7.1 and 2.7.2 First buses delivered to and initially accepted at AC Transit (2.7.1) and OCTA (2.7.2); <i>Deliverables: Formal acceptance documents from transit agencies; vehicle registration and confirmation of installed data collection equipment</i>	04/06/2018	04/12/2018
2.7.3 Remaining 9 buses delivered to and initially accepted at AC Transit; <i>Deliverables: Formal acceptance documents from AC Transit; vehicle registration and confirmation of installed data collection equipment</i>	07/20/2018	09/13/2018
2.7.4 Remaining 9 buses delivered to and initially accepted at OCTA; <i>Deliverables: Formal acceptance documents from OCTA; vehicle registration and confirmation of installed data collection equipment</i>	10/19/2018	12/13/2018
2.8 Formal transfer of buses. Each bus must operate in service for 40 hours without problems before they will be formally transferred to the transit agencies. <i>Deliverables: documentation confirming 40-hour of problem-free operation and formal transfer.</i>	04/13/2018	12/28/2018
2.8.1 and 2.8.2 First buses formally accepted after 40 hours of service without problems at AC Transit (2.8.1) and OCTA (2.8.2); <i>Deliverables: Formal acceptance documents from transit agencies.</i>	04/13/2018	05/31/2018

Work Task	Start Date	Completion Date
2.8.3 Remaining 9 buses formally accepted at AC Transit; <i>Deliverables: Formal acceptance documents from AC Transit.</i>	08/06/2018	09/28/2018
2.8.4 Remaining 9 buses formally accepted at OCTA; <i>Deliverables: Formal acceptance documents from OCTA.</i>	11/05/2018	12/28/2018
2.9 Develop support and training materials and programs: New Flyer, with assistance from CTE, TWA and BZE, will develop a Maintenance Support Plan to ensure that the buses are supported throughout and beyond the demonstration period. New Flyer will publish service and operating manuals. CTE will coordinate with AC Transit and OCTA on establishing a training program for mechanics and drivers. <i>Deliverables: Copies of Maintenance Support Plan, Service and Operating Manuals, training program outline; copies of training rosters.</i>	09/01/2017	06/21/2018
Task 3 – OCTA Hydrogen Station Project team will design, install and commission a hydrogen station capable of supporting 10 to 20 fuel cell transit buses.	02/01/2017	12/31/2018
3.1 Linde contract: OCTA and Linde, with support from CTE and BZE, will finalize technical specifications and commercial terms for a procurement and service agreement. OCTA will issue a Notice to Proceed to Linde upon execution of contract. <i>Deliverables: copies of executed agreement and Notice to Proceed.</i>	02/01/2017	04/24/2017
3.2 Fueling station kickoff meeting: CTE, OCTA, Linde, TWA and BZE will hold a station kick off meeting to review project scope, schedule, budget, roles and responsibilities. <i>Deliverable: Agenda, presentations, and minutes.</i>	04/27/2017	04/27/2017

Work Task	Start Date	Completion Date
3.3 Site/Station Design: Linde, working with OCTA, CTE and BZE, will finalize architectural and engineering plans and drawings, which will undergo three phases of review – preliminary, critical and final design. Plans will include mechanical, civil, and electrical layouts, as well as completed environmental reviews and construction schedules. Final design work will include a Service and Fuel Supply plan that will minimize station downtime.	04/25/2017	09/18/2017
3.3.1 Basic Engineering Completed. <i>Deliverables: Preliminary P&IDs, Basic Site Drawings, and Summary of Initial Safety Reviews.</i>	04/25/2017	05/22/2017
3.3.5 Final Design Review. <i>Deliverable: Service and Fuel Supply Plan</i>	08/22/2017	09/18/2017
3.4 Equipment procurement: Linde will order subcomponents and materials, build equipment, and deliver to OCTA for installation.	04/25/2017	06/25/2018
3.4.2 Receive Equipment Drawings. <i>Deliverables: Transmittal of Drawings from OEM and Supplier Invoice.</i>	05/02/2017	08/21/2017
3.4.4 Equipment has been manufactured and shipped to OCTA. <i>Deliverables: Photographs of completed units and Bill of Lading showing evidence that equipment has been shipped to OCTA.</i>	05/01/2018	06/25/2018
3.5 Obtain Permits: OCTA, with support from CTE and Linde, will obtain required permits to begin station installation. <i>Deliverables: Copies of permits and Categorical Exemption.</i>	02/01/2017	12/27/2017
3.6 Station construction and installation: Linde with support from OCTA will complete site preparation and equipment installation, including all civil, mechanical and electrical work, and station preparation for commissioning. <i>Deliverable: Construction Completion Report.</i>	05/01/2018	11/05/2018
3.6.4 Fueling Equipment Installation: Equipment has been installed and all power, gas, and telecommunications connections have been completed. <i>Deliverables: Construction Completion Report.</i>	08/07/2018	10/29/2018

Work Task	Start Date	Completion Date
<p>3.7 Commissioning: Linde, with support from OCTA and CTE will test all hydrogen storage, compression, and dispensing equipment, control systems and high pressure lines, then will conduct additional tests for hydrogen purity and particulate contamination. CTE will verify that the hydrogen station meets the requirements detailed in Appendix C of the Solicitation. Equipment operation and station calibration will be tested and adjusted using the first of the buses to arrive. <i>Deliverable: certification that the station satisfies the minimum requirements and is ready to start fueling buses for daily service. Deliverables: Commissioning Completion Report including training of employees (see Task 3.8).</i></p>	11/06/2018	12/31/2018
<p>3.8 Training: CTE will organize and coordinate training sessions with Linde, OCTA and local first responders to ensure that all relevant OCTA staff and first responders are fully trained on all safety systems and on the safe operation and maintenance of the station. <i>Deliverables: Commissioning Completion Report including training of employees; copies of training curriculum, agendas, and training rosters.</i></p>	12/11/2018	12/31/2018
<p>Task 4 - AC Transit Hydrogen Station Upgrade Emeryville station will be upgraded for faster and more efficient fueling.</p>	02/01/2017	06/14/2018
<p>4.1 Technical specifications: AC Transit, CTE and BZE will work with Linde finalize technical specifications and commercial terms for a procurement and service agreement. Upon execution of subcontract between AC Transit and Linde (Task 1.2), AC Transit will issue a Notice to Proceed. <i>Deliverables: copies of procurement/service agreement and Notice to Proceed.</i></p>	02/01/2017	03/16/2017
<p>4.2 Kickoff meeting: CTE will organize kickoff meeting with AC Transit, Linde, TWA and BZE to review project scope, schedule, budget, roles and responsibilities. <i>Deliverables: agenda, presentation and minutes.</i></p>	03/21/2017	03/21/2017

Work Task	Start Date	Completion Date
4.3 Site and station design: Linde, working with AC Transit, CTE, TWA and BZE, will prepare architectural and engineering plans and drawings, which will undergo three phases of review – preliminary, critical and final design. Plans will include mechanical, civil, and electrical layouts, as well as completed environmental reviews and construction schedules. Final design work will include a Service and Fuel Supply plan that will minimize station downtime.	03/17/2017	05/25/2017
4.3.1 Basic Engineering Completed. <i>Deliverables: Preliminary P&IDs, Basic Site Drawings, and Summary of Initial Safety Reviews,</i>	03/17/2017	04/13/2017
4.3.5 Final Design Review. <i>Deliverable: Service and Fuel Supply Plan</i>	05/19/2017	05/25/2017
4.4 Equipment procurement: Linde will order subcomponents and materials, build equipment, and deliver to AC Transit for installation. <i>Deliverable: Transmittal of Drawings from OEM & Supplier Invoice; Photographs of Units and Shipment Notification.</i>	3/17/2017	12/28/2017
4.4.2 Receive Equipment Drawings. <i>Deliverables: Transmittal of Drawings from OEM and Supplier Invoice.</i>	03/24/2017	07/13/2017
4.4.4 Equipment has been manufactured and shipped to OCTA. <i>Deliverables: Photographs of completed units and Bill of Lading showing evidence that equipment has been shipped to AC Transit.</i>	11/24/2017	12/28/2017
4.5 Obtain permits: AC Transit, with support from CTE and Linde, will obtain required permits to begin the station upgrade. AC Transit will amend the previously obtained Categorical Exemption obtained for the hydrogen station in 2008 to include the planned station upgrade. <i>Deliverables: Copies of permits and amended Categorical Exemption</i>	02/01/2017	09/14/2017

Work Task	Start Date	Completion Date
<p>4.6 Station construction and site preparation: AC Transit will install new hydrogen supply pipelines leading from the existing hydrogen supply area to the new refueling location at the diesel fueling island, and will oversee the installation of the new fueling canopy and extension of the fueling island to accommodate 2 hydrogen dispensers. Linde will prepare the site for the installation of the new compressor and hydrogen dispensers. <i>Deliverable: progress updates in quarterly status reports.</i></p>	09/01/2017	02/15/2018
<p>4.7 Equipment installation and commissioning: Linde, with support from CTE and AC Transit, will install and test the new IC 90 compressor and 2 dispensers, control systems and high pressure lines, then conduct additional tests for hydrogen purity and particulate contamination. CTE will verify that the upgraded hydrogen station meets the requirements detailed in Appendix C of the Solicitation. Equipment operation and station calibration will be tested and adjusted as the final step in commissioning. <i>Deliverable: Construction Completion Report; certification that the station satisfies the minimum requirements and is ready to start fueling buses for daily service; Commissioning Completion Report.</i></p>	02/16/2018	06/14/2018
<p>4.7.1 Fueling Equipment Installation: Equipment has been installed and all power, gas, and telecommunications connections have been completed. <i>Deliverables: Construction Completion Report.</i></p>	02/16/2018	04/12/2018
<p>4.8 Training: CTE will organize and coordinate training sessions with Linde, AC Transit and local first responders to ensure that all relevant AC Transit staff and first responders are fully trained on all safety systems and on the safe operation and maintenance of the station.</p>	05/25/2018	06/14/2018
<p>4.8.1 Employee Training. <i>Deliverables: Training employees; copies of training curriculum, agendas, and training rosters.</i></p>	05/25/2018	06/14/2018

Work Task	Start Date	Completion Date
<p>Task 5 – OCTA Facility Upgrades The OCTA facility’s electrical, communication, water, ventilation, and gas detection systems will be upgraded to support both the installation of a new hydrogen fueling station and upgrades to the service bays where fuel cell bus service and maintenance activities will take place.</p>	02/01/2017	08/17/2018
<p>5.1 Design Procurement: OCTA will secure design and engineering services through their Contracts Administration and Materials Management Department. <i>Deliverable: copy of Architectural and Engineering Service Contract.</i></p>	02/22/2017	04/18/2017
<p>5.2 Design kickoff meeting: OCTA with support from CTE and BZE will hold a facility upgrade kickoff meeting to review project scope, schedule, budget, roles and responsibilities. <i>Deliverables: agenda, presentations and minutes.</i></p>	04/21/2017	04/24/2017
<p>5.3 Electrical, communication and water: OCTA, with support from Linde, CTE and BZE, will design, engineer, construct and install electrical, communication and water services. Work will include: upgrading the electrical system with a larger on-site transformer; installing analog and digital communication lines to permit remote monitoring and control of the fueling station; and installing drainage and an additional water line to service the hydrogen station. <i>Deliverables: documentation of completed activities in quarterly status reports.</i></p>	02/01/2017	07/25/2018
<p>5.4 Permitting: OCTA, with support from CTE and Linde, will obtain the required permits to begin station installation as detailed in Appendix E of the FCEBCC Project Application. <i>Deliverables: All required approved permits.</i></p>	04/25/2017	08/22/2017

Work Task	Start Date	Completion Date
<p>5.5 Detection and ventilation systems: OCTA, with support from Linde, CTE and BZE will design, engineer, construct and install hydrogen gas detection and improved ventilation systems. Hydrogen detectors will be wired into OCTA's alarm and fire control panels and will be installed in buildings where routine maintenance, body work, washing, fueling and bus repair services are performed. The ventilation system will be upgraded to increase the volume of air exchange in OCTA's enclosed facilities. <i>Deliverables: documentation of completed activities in quarterly status reports.</i></p>	04/25/2017	07/25/2018
<p>5.6 Training: CTE will organize and coordinate training sessions with Linde, OCTA and local first responders to ensure that all relevant OCTA staff and first responders are trained on safety systems and safe bus maintenance. <i>Deliverables: training curriculum, training session agendas, attendee rosters.</i></p>	07/27/2018	08/17/2018
<p>Task 6 – Deployment and Data Collection Project team will deploy buses into daily scheduled transit service for the useful life of the vehicles, and will ensure that transit buses and fueling stations are maintained for continued operation for the duration of the project and that data on bus and station operation is collected and provided to ARB.</p>	04/13/2018	03/30/2020
<p>6.1 FCEB Operations: AC Transit and OCTA will be assisted by CTE, New Flyer, TWA and BZE in conducting initial and ongoing training, providing ongoing in-service operations, utilizing good maintenance practices and procedures, and collecting and transmitting data to (and as specified by) ARB's third-party data contractor. <i>Deliverables: training curriculum, training session agendas, attendee rosters, progress reports on operations and service assistance by CTE, New Flyer, TWA and BZE, and routine data transmittal to ARB's third-party data analysis contractor (all in-service operation deliverables to be included with quarterly status updates).</i></p>	04/13/2018	03/30/2020
<p>6.1.1 Operator Training</p>	04/13/2018	05/10/2018
<p>6.1.2 In-service Operation (12 months)</p>	10/01/2018	11/29/2019

Work Task	Start Date	Completion Date
6.1.3 Maintenance Support	04/13/2018	03/30/2020
6.1.4 Vehicle Data Collection	04/13/2018	01/31/2020
<p>6.2 Hydrogen Station Operations: AC Transit and OCTA will be assisted by CTE, Linde and BZE in establishing good service and maintenance practices, defining fueling protocols and procedures, providing continued guidance to support daily operations, establishing ongoing training curriculum, and collecting and transmitting data to (and as specified by) ARB's third-party data contractor. <i>Deliverables: training curriculum, training session agendas, attendee rosters, and progress reports on operations and service assistance by CTE, Linde and BZE (all to be included with quarterly status updates).</i></p>	06/15/2018	03/30/2020

EXHIBIT B, Attachment IV

Key Project Personnel

Grantee: Center for Transportation and the Environment Grant No.: G16-ZBUS-01

Project: Fuel Cell Electric Bus Commercialization Consortium (FCEBCC) Project

Name	Position	Duties
<i>Center for Transportation and the Environment (CTE)</i>		
Jaimie Levin	Director of West Coast Operations and Lead Project Manager for FCEBCC Project	Negotiates and executes contracts; oversees the building and deployment of vehicles and fueling stations; assists with permitting and stakeholder outreach; supports demonstration readiness; coordinates and executes training; assists with operational support; and ensures data collection and reporting requirements are met.
Erik Bigelow	Senior Project Manager for FCEBCC Project	Assists with contract negotiation and execution, and preparation of project management plans and schedules; tracks budgets and progress on schedule; prepares progress reports to ARB and AQMDs; organizes and conducts project reviews; and organizes and implements training and orientation programs.
Wendy Morgan	Project Manager for FCEBCC project	Assists with contract negotiation and execution, and preparation of project management plans and schedules; tracks budgets and progress on schedule; prepares progress reports to ARB and AQMDs; organizes and conducts project reviews; and organizes and implements training and orientation programs.

Name	Position	Duties
<i>Alameda-Contra Costa Transit District (AC Transit)</i>		
Chris Andrichak	Manager of Capital Planning and Grants	Oversees grant management and reporting for AC Transit.
Sal Llamas	Director of Maintenance	Responsible for district-wide maintenance coordination.
Stuart Hoffman	Technical Services Manager	Responsible for developing bus specifications.
Roland Fecteau	Deputy Director of Maintenance	Responsible for coordinating hydrogen bus maintenance program
Joe Callaway	Senior Project Manager	Responsible for managing infrastructure and hydrogen station upgrade.
<i>Orange County Transit Authority (OCTA)</i>		
Sue Zuhlke	Director of Maintenance and Motorist Services	Grant Project Manager for OCTA responsible for ensuring compliance with grant requirements, ensuring completion of training of operations and maintenance staff, internal reporting, and resolving issues.
Cliff Thorne	Deputy Manager of Maintenance	Manages facilities, maintenance, and maintenance training and resource management; coordinates bus maintenance operations and first responder training; project management oversight; liaison between Director and Project Managers on all aspects of project; reports on project milestones, budget, and implementation.

Name	Position	Duties
Bill Habibe	Manager of Transit Technical Services	Responsible for technical aspects of the bus build including preparation of specifications, QA/QC during manufacturing, bus acceptance, revenue testing, preparation of technical data notices, vehicle health monitoring and issue resolution, warranty recover, CHP liaison, and data collection and reporting.
George Olivo	Program Manager, Facilities Engineering	Responsible for facility modifications for hydrogen detection system; liaison with Linde on Hydrogen station construction; contract out and manage facility upgrades to prepare for hydrogen station including transformer upgrades, electric service cable installation, and water service installation; and ensure compliance with grant agreement and all appropriate federal, state, and local requirements.
<i>New Flyer of America, Inc.</i>		
Chris Stoddart	Vice President of Engineering Services	Executive project sponsor
David Warren	Director of Sustainable Transportation	Oversee zero emission program; and coordinates technical, sales, regulatory, and after sales services.
Brydon Owen	New Product Development Engineering Manager	Manages electrical and fuel cell system integration and design.
Thomas Small	Director of New Product Development	Manages project staffing and engineering.
Glen Naylor	Senior Technical Advisor	Project manager and senior technical advisor.
Kevin Hiemenz	Regional Director, Western Service	Oversees service support and warranties.

Name	Position	Duties
<i>Ballard Power Systems</i>		
Christian Tuazon	Platform Manager, Heavy Duty Systems	Leads engineering for FCvelocity-HD85 (fuel cell power plant to be used in New Flyer buses) and development activities for larger fuel cell systems.
Neal Fink	Application Engineering Team Lead	Assist with system integration including providing documentation, mechanical and electrical installation support for fuel cell modules, sub-system testing, from bus build through vehicle commissioning
Emmanuel Diaz	After Sales Support	Provides warranty support services regarding fuel cell power plants after vehicles are placed in service.
<i>Linde LLC</i>		
Nitin Natesan	Manager of Project Development, Hydrogen Fueling	Responsible for project development and commercial management.
Eileen Brown	Head of Hydrogen Fueling Engineering	Responsible for technical engineering management.
Kyle McKeown	Technical Project Management and Engineering	Responsible for technical solution engineering and hydrogen station commissioning.
Jennifer Yan	Senior Project Manager	Manage design and construction of the project.
<i>Transworld Associates LLC (TWA)</i>		
Stuart Thompson	Owner	Project management, technical assessment, specification development, contract writing, contract adherence, design analysis, reporting, auditing, quality inspections of systems and procedures, and manage subcontractors.

Name	Position	Duties
<i>Byrne Zero Emission, LLC (BZE)</i>		
Douglas Byrne	Chief Executive Officer	Perform technical review of buses and stations, inspect vehicles during production, and provide operator, maintenance and first responder training.

NOTE: Changes in Key Project Personnel may be made if approved by ARB in writing. Changes in Key Project Personnel do not require a written grant amendment.

GRANT SOLICITATION

Air Quality Improvement Program and Low Carbon Transportation Greenhouse Gas Reduction Fund (GGRF) Investments

Zero-Emission Truck and Bus Pilot Commercial Deployment Projects

Mobile Source Control Division
California Air Resources Board
October 1, 2015



California Environmental Protection Agency

 **Air Resources Board**

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EXHIBIT D

GRANTEE APPLICATION PACKAGE

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EXHIBIT E

**LETTER from ARB to LINDE NORTH AMERICA, INC.
dated OCTOBER 23, 2009**

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Air Resources Board



Linda S. Adams
Secretary for
Environmental Protection

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Arnold Schwarzenegger
Governor

October 23, 2009

Steven Eckhardt
Linde North America, Inc.
575 Mountain Avenue
Murray Hill, New Jersey 07974

Dear Mr. Eckhardt,

Air Resources Board (ARB or Board) is responding to your October 14, 2009, letter requesting a formal response from ARB as to whether the hydrogen pathway described below can be considered renewable under Senate Bill 1505 Chapter 877, and Statutes of 2006.

Specifically, Linde proposes to purchase hydrogen from an existing liquid hydrogen source to make use of existing hydrogen supply. This supply source produces hydrogen in California using a steam methane reformer (SMR), which uses natural gas as the feedstock. Linde proposes to 'replace' the pipeline natural gas with an energy equivalent amount of biogas.

Linde will accomplish this by purchasing biogas from a landfill or anaerobic digester that is purified to pipeline specifications and injected into the pipeline. Linde will show a physical pathway for the biogas through relevant commercial and transfer of ownership documentation. This documentation will show that the source biogas could be transported from the production point to the hydrogen plant in California (i.e. a physical pathway exists). In addition, Linde will have proper documentation and certification that the biogas produced is renewable, including a description of how the biogas is produced; that Linde purchased the renewable attributes of the biogas; and that they are applying the renewable attributes to the natural gas used to produce the hydrogen that they purchase from the SMR plant in California. The producer of the hydrogen will not at any time have ownership of the biogas and, since Linde does not produce the hydrogen, they will not take ownership of the biogas molecules either. However, Linde will have a certified document that shows they own the renewable attributes of the biogas, and those attributes are being used solely by Linde on an energy equivalent basis for the hydrogen they provide for vehicle fueling applications.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

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Mr. Steven Eckhardt

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As an example, approximately 20,000 cubic feet per day (cf/day) of natural gas are required to produce 100 kilograms per day (kg/day) of hydrogen via the SMR process.

Linde will purchase the energy equivalent in biogas and apply the biogas renewable attributes to the 100 kg/day of hydrogen purchased from the SMR plant, effectively offsetting 20,000 cf/day of natural gas consumed in the SMR process.

Based on the information provided by Linde, ARB staff considers the hydrogen pathway described above as renewable per the requirements of SB 1505 under the following conditions:

1. Linde must document the renewable biogas into the system, the amount of hydrogen produced from the system, and the amount of credit claimed by whoever places the renewable biogas into the system.
2. The amount of credit claimed should not exceed the amount of hydrogen produced from the system, and there should be no double counting, i.e., the actual hydrogen producer cannot claim the same credit that the person who put the renewable biogas into the system claims.
3. No change to the above-described hydrogen pathway is made, and no material provision, description, or process has been omitted.

ARB staff plans to develop a Hydrogen Emissions & Renewable Energy regulation, pursuant to SB1505, which will include the credit trading proposal described above. This draft regulation will be submitted to the Board for their consideration. The renewable energy credit trading provisions, if any, adopted by the Board will be deemed to comply with the provisions of SB 1505. Therefore, with the understanding that staff's proposal is subject to formal Board approval, staff currently considers Linde's hydrogen pathway described above to fulfill the requirements of SB 1505.

If you have any questions, please contact Gerhard Achtelik, Manager of the Zero Emission Vehicle (ZEV) Infrastructure Section at (916) 323-8973; or Ben Deal at (916) 322-8449 or via email at bdeal@arb.ca.gov.

Sincerely,



Gerhard Achtelik, Manager
ZEV Infrastructure Section

cc: Ben Deal
Air Resource Engineer
ZEV Infrastructure Section

Attachment III: BAAQMD Grant Agreement with AC Transit

TRANSPORTATION FUND FOR CLEAN AIR FUNDING AGREEMENT
BETWEEN
THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT
AND
ALAMEDA-CONTRA COSTA TRANSIT DISTRICT
PROJECT NUMBER: 16HDG002

This funding agreement “Agreement” is made and entered into between the Alameda-Contra Costa Transit District (“Project Sponsor”) and the Bay Area Air Quality Management District (the “Air District” hereinafter referred to jointly as the “Parties”).

SECTION I

RECITALS

- 1) California Health and Safety Code Sections 44223 and 44225 authorize the Air District to levy a fee on motor vehicles registered within its jurisdiction and to use those fees to implement mobile source and transportation projects that result in surplus emission reductions.
- 2) The Air District has established a grant fund, entitled the Transportation Fund for Clean Air (“TFCA”) to implement such projects. Under the TFCA’s Regional Fund Program, the Air District may issue TFCA funds to public agencies and, for certain vehicle-based projects, to other entities for projects within the Air District’s jurisdiction (“Program”).
- 3) California Health and Safety Code Section 44241 lists the permissible types of projects, all of which must conform to the transportation control measures and mobile source measures that are included in the plan(s) adopted pursuant to California Health and Safety Code Sections 40233, 40717, and 40919 and are in effect as of the date of execution of this Agreement.
- 4) On July 29, 2015, the Air District’s Board of Directors approved the Policies and Evaluation Criteria for Fiscal Year Ending (FYE) 2016, which govern the Program requirements.
- 5) On July 20, 2016, the Air District’s Board of Directors approved an award of a TFCA Program grant to the Project Sponsor to implement an eligible mobile source or transportation control project to improve air quality in the San Francisco Bay Area Air Basin based on the Program’s eligibility criteria and on information provided in Project Sponsor’s application (“Project”).
- 6) The Project Sponsor affirms that the Project has not commenced, would not have otherwise commenced without Program funding, and will result in surplus emission reduction.
- 7) The Air District and Project Sponsor desire to enter into this Agreement to implement the Project in accordance with the terms and conditions of this Agreement, including all attachments thereto.

NOW, THEREFORE, the Parties hereby agree as follows:

SECTION II

PROJECT SPONSOR OBLIGATIONS

- 1) The Project Sponsor hereby agrees to implement the Project, which is described in the “Project Description” (Attachment B), in accordance with the cost, terms, and conditions prescribed in the “Project Specific Information” (Attachment A). Failure to implement the Project in accordance with the terms and conditions set forth in this Agreement and all attachments thereto shall be deemed a breach of this Agreement and may result in termination of the Agreement or a reduction of the award.
- 2) The Project Sponsor shall complete the Project within the Total Project Cost (as set forth in Section 3 of Attachment A) and in accordance with Sections 4, 5 and 6 of Attachment A. The Project Sponsor shall be solely responsible for all costs that exceed either the total TFCA Funds Awarded or the maximum award per vehicle specified in Sections 5 and 6 of Attachment A.
- 3) The Project Sponsor shall contribute or expend its Matching Funds prior to submission of the Final Invoice. The Project Sponsor is responsible for assuring that the use of the Matching Funds does not conflict with any federal, state, or local requirements for their use.
- 4) Reserved.
- 5) Reserved.
- 6) Reserved.
- 7) The Project Sponsor shall allow the Air District or its authorized representatives to conduct performance and fiscal audits of the Project at all times during the Term of this Agreement. The Project Sponsor shall cooperate with such audits and shall make available to the Air District all records relating to Project performance and expenses incurred in the implementation of the Project.

The Project Sponsor shall allow the Air District or its authorized representatives to inspect the Project at all times during the Project Useful Life. The Project Sponsor shall cooperate with such inspections.

- 8) The Project Sponsor shall prepare and maintain all necessary Project Records to document Project activities and performance, including invoicing documentation set forth in Section 7 of Attachment A, documentation to support the Project reporting requirements set forth in Attachment C, and insurance documentation set forth in Attachment D (all of which comprise “Project Records”). Project Records shall also include documentation that verifies compliance with the requirements set forth in Section II.11 below. The Project Sponsor shall keep Project Records in one central location for a period of three (3) years after the later of a) the date of the Air District’s final payment, or b) the end of the Project Useful Life. The Project Sponsor shall submit the following reports to the Air District by the due dates specified in Attachment C:
 - a. Semi-annual Report(s),
 - b. Interim Status Report, and
 - c. Annual Reports.

These reports are public documents.

- 9) The Project Sponsor shall implement and operate the Project for the duration of the Project Useful Life. The Project Sponsor may not make any permanent changes to the operational status of the Project without the prior approval of the Air District. Failure to obtain prior approval is a breach of this Agreement.

For purposes of this Agreement, a “change to the operational status” occurs whenever any portion of the Project is permanently removed from active service, relocated to a different location, sold, or transferred to another entity, before full completion of the Project Useful Life. If a portion of the project is rendered inoperable through unforeseen incident, the Project Sponsor shall notify the Air District within 15 days of the incident for the duration of the Project Useful Life.

If the Project Sponsor intends to make a change to the Project, the Project Sponsor may seek to modify this Agreement in advance, pursuant to Section IV.3.

- 10) Reserved.
- 11) The Project Sponsor shall acknowledge the Air District as a Project funding source at all times during the Project Useful Life. The Project Sponsor shall use, and require any third party that implements the Project to use, the Air District’s approved logo for the Project. The required documentation and materials are specified in Attachment C.
- 12) The Project Sponsor shall obtain and maintain throughout the Project Useful Life the insurance coverage specified in Attachment D, “Insurance Requirements,” and shall comply with all insurance requirements set forth therein, including the provision of documentation of said insurance coverage. Project Sponsor shall retain copies of insurance as part of the Project Records. Failure to obtain and maintain the insurance coverage and to comply with all insurance requirements is a breach of this Agreement.
- 13) To the extent not otherwise prohibited by law, and to the extent required by the California Public Records Act (Government Code section 6250 et seq.), the Project Sponsor shall place in the public domain any software, written document, or other product developed with TFCA funds as part of the Project and shall require recipients of Project funds, if any, to do the same.
- 14) The Project Sponsor shall use TFCA Funds Awarded only for the implementation of a project that the Air District determines will result in surplus motor vehicle emission reductions within the Air District’s jurisdiction. Surplus emission reductions are those that exceed the requirements of applicable regulations or other legal obligations (including contracts) as of the Effective Date of this Agreement.
- 15) The Project Sponsor shall comply with all Program requirements set forth in the Air District’s Guidance, which are incorporated herein and made a part hereof by this reference as if fully set forth herein.

SECTION III

AIR DISTRICT OBLIGATIONS

- 1) The Air District will provide TFCA funds for this Project in an amount not to exceed the TFCA Funds Awarded, in accordance with the formula set forth in Attachment A. Thus, if the approved total Eligible Costs of the Project are less than the Total Project Cost, the Air District shall reduce the amount of TFCA Funds Awarded.
- 2) The Air District will endeavor to pay the undisputed amount of an approved invoice within thirty (30) calendar days of the date of Air District’s receipt of such invoice and in accordance with the Invoice and Payment Schedule set forth in Section 7 of Attachment A.
- 3) The Air District will provide timely notice to the Project Sponsor prior to conducting any audits of the Project. Also, the Air District makes reasonable efforts to conduct inspections during normal business hours of the Project Sponsor.

- 4) The Air District will provide the Project Sponsor a copy of the fiscal and performance audits of the Project.
- 5) The Air District will provide the Project Sponsor all applicable Air District-approved reporting and invoice forms.
- 6) The Air District will make its logo available to Project Sponsor solely for use to fulfill the Project Sponsor's obligation under Section II.11 of this Agreement.

SECTION IV

GENERAL PROVISIONS

- 1) **Effective Date:** The effective date of this Agreement is the date the Air District Executive Officer/Air Pollution Control Officer executes this Agreement (the "Effective Date").
- 2) **Term:** The term of this Agreement shall commence on the Effective Date of this Agreement and end on three (3) years from the last day of the Project Useful Life, unless this Agreement is terminated or amended as provided below, or the Term is extended.
- 3) **Amendment:** This Agreement may not be modified except in writing, signed by both Parties hereto, and any attempt at oral modification of this Agreement shall be void and of no effect. Any change in Project scope shall constitute an Amendment under this Agreement.
- 4) **Project Liaison:** Within thirty (30) calendar days from the Effective Date of this Agreement, the Project Sponsor shall notify the Air District of the Project Sponsor's Project Liaison and of the Liaison's address, telephone number, and email address. The Project Liaison shall be the liaison to the Air District pertaining to implementation of this Agreement and shall be the day-to-day contact about the Project. All correspondence shall be addressed to the Project Liaison. The Project Liaison shall notify the Air District of a change of Project Liaison or of the Liaison's contact information in writing no later than thirty (30) calendar days from the date of the change.
- 5) **Notices:** Any notice that may be required under this Agreement shall be in writing, shall be effective when received, and shall be given by personal service, by U.S. Postal Service first class mail, or by certified mail (return receipt requested). Within thirty (30) calendar days of the Effective Date of this Agreement, the Parties shall inform the other Party of the addressee for notice. Each Party shall promptly inform the other of any changes for notice. All correspondence shall reference the Project Number.
- 6) **Project Due Dates:** If any Project act or task must be performed by a particular deadline or date, which day falls on a Saturday or holiday (which includes Sunday), that act or task may be performed by the next business day, except where otherwise noted in Special Conditions, Attachment A.
- 7) **Termination:**
 - A. **Voluntary.** Either Party may terminate this Agreement by giving written notice to the other Party. The notice of termination shall specify the effective date of termination, which shall be no less than thirty (30) calendar days from the date of receipt of such notice. Notice shall be delivered as provided for in Section IV.5 above. If either the Air District or the Project Sponsor terminates this Agreement, the Project Sponsor shall not be entitled to the full amount of the TFCA Funds Awarded. The Project Sponsor may retain or receive payment for that portion of the TFCA Funds to which they are entitled as well as all amounts due to Project Sponsor that

Air District has not yet paid, including but not limited to, those Eligible Costs on the Project incurred by Project Sponsor.

The amount of TFCA funds that Project Sponsor is eligible for under this Section IV.7 shall be determined as follows:

- i. First, the Project Sponsor shall submit a report that identifies each Project vehicle's number of vehicle miles traveled (Actual VMT) and the number of cumulative days in operation (Actual Operating Days) from when each Vehicle was placed into service until the effective date of termination.
- ii. Second, the Air District shall calculate the percentage of the award amount that Project Sponsor is eligible for, which will be the lesser of:
 - a. The percentage of the Operational Period that the Project has completed, which shall be determined by dividing the sum of the Actual Operating Days of all Vehicle(s) by the sum of the Operational Period for all Vehicle(s); and
 - b. The percentage of the Usage Requirement that the Project has completed, which shall be determined by dividing the sum of the Actual VMT of all Vehicle(s) by the Usage Requirement.
- iii. Third, the Air District shall multiply TFCA Funds Awarded by the percentage calculated above in subsection 7.A.ii to determine the amount that the Project Sponsor is eligible for.

If the Air District has paid the Project Sponsor more than the amount of funds to which the Project Sponsor is eligible, the Project Sponsor shall return the difference between the funds paid and the funds eligible to the Air District within thirty (30) calendar days of the effective date of termination.

- B. Breach. The Air District may terminate this Agreement for breach of any term of this Agreement. The Air District will deliver a written notice of breach that specifies the date of termination, which shall be no less than thirty (30) calendar days from the date of delivery of such notice. The notice will specify the nature of the breach and will direct the Project Sponsor to cease all work immediately upon receipt of the notice, except as specifically provided for in the notice. In the alternative, or as provision of the notice of termination, the Air District may allow the Project Sponsor to cure the breach; in that instance, the notice shall specify the date by which such breach must be cured (the "Cure Period"). The notice of termination will specify the amount of the TFCA Funds Awarded that the Air District has paid and the amount owed, if any, by the Project Sponsor to the Air District. The Project Sponsor shall reimburse any funds owed to the Air District prior to the effective date of termination.

The Air District will calculate the amount of funds owed based on the remaining contract term and usage requirement that Project Sponsor has not completed prior to the breach, based on the methodology described in subsection 7.A.

C. Reserved.

- 8) Additional Provisions and Additional Acts and Documents: Each Party agrees to do all such things and take all such actions, and to make, execute and deliver such other documents that are reasonably required to carry out the provisions, intent and purpose of this Agreement. All attachments to this Agreement are expressly incorporated herein by this reference and made a part hereof as though fully set forth.

- 9) Indemnification: The Project Sponsor shall indemnify and hold the Air District, its officers, employees, agents, and successors-in-interest harmless from and against any and all liability, loss, expense, including reasonable attorneys' fees, or claims for injury or damages arising out of the performance of this Agreement but only in proportion to and to the extent such liability, loss, expense, attorneys' fees, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of the Project Sponsor, its officers, agents, or employees. The Project Sponsor shall require any third party who owns, operates, controls, or implements any portion of the Project to indemnify and hold the Air District, its officers, employees, agents, and successors-in-interest harmless from and against any and all liability, loss, expense, including reasonable attorneys' fees, or claims for injury or damages arising out of the performance of this Agreement but only in proportion to and to the extent such liability, loss, expense, attorneys' fees, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of the third party, its officers, agents, or employees.
- 10) Independent Contractor: Neither the Project Sponsor nor its officers, employees, agents, or representatives shall be considered employees or agents of the Air District. This Section does not apply to elected officials serving concurrently on the governing boards of both the Project Sponsor and the Air District.
- 11) Assignment: Neither Party shall assign, sell, license, or otherwise transfer any rights or obligations under this Agreement to a third party without the prior written consent of the other Party. All of the terms, provisions and conditions of this Agreement will be binding upon and inure to the benefit of the Parties and their respective successors, assigns and legal representatives.
- 12) Waiver: No waiver of a breach, of failure of any condition, or of any right or remedy contained in or granted by the provisions of this Agreement shall be effective unless it is in writing and signed by the Party waiving the breach, failure, right or remedy. No waiver of any breach, failure, right or remedy shall be deemed a waiver of any other breach, whether or not similar, nor shall any waiver constitute a continuing waiver unless the writing so specifies. Further, the failure of a Party to enforce performance by the other Party of any term, covenant, or condition of this Agreement, and the failure of a Party to exercise any rights or remedies hereunder, shall not be deemed a waiver or relinquishment by that Party to enforce future performance of any such terms, covenants, or conditions, or to exercise any future rights or remedies.
- 13) Severability: If a court of competent jurisdiction holds any provision of this Agreement to be illegal, unenforceable or invalid in whole or in part for any reason, the validity and enforceability of the remaining provisions, or portions of them, will not be affected.
- 14) Force Majeure: Neither the Air District nor the Project Sponsor shall be liable for, or deemed to be in default for, any delay or failure in performance under this Agreement or interruption of services resulting, directly or indirectly, from acts of God, enemy or hostile governmental action, civil commotion, strikes, lockouts, labor disputes, fire or other casualty, judicial orders, governmental controls, regulations or restrictions, inability to obtain labor or materials or reasonable substitutes for labor or materials necessary for performance of the Project, or other causes, except financial, that are beyond the reasonable control of the Air District or the Project Sponsor, for a period of time equal to the period of such force majeure event, provided that the Party failing to perform notifies the other Party within fifteen (15) calendar days of discovery of the force majeure event, and provided further that that Party takes all reasonable action to mitigate the damages resulting from the failure to perform. Notwithstanding the above, if the cause of the force majeure event is due to a Party's own action or inaction, then such cause shall not excuse that Party from performance under this Agreement.

- 15) **Governing Law:** Any dispute that arises under or relates to this Agreement shall be governed by California law, excluding any laws that direct the application of another jurisdiction's laws. Venue for resolution of any dispute that arises under or relates to this Agreement, including mediation, shall be San Francisco, California.
- 16) **Public Entities - Conflict of Interest:** The Project Sponsor warrants and represents that its public officials, including its officers and employees in their official capacity, presently have no interest and agrees that its public officials, including its officers and employees in their official capacity, will not acquire any interest which would represent a conflict of interest under California Government Code sections 1090 et seq. and 87100 et seq. during the performance of this Agreement.
- 17) **Integration:** This Agreement, including all attachments hereto, represents the final, complete, and exclusive statement of the agreement between the Air District and the Project Sponsor related to the Parties' rights and obligations and subject matter described in this Agreement, and supersedes all prior and other contemporaneous understandings and agreements of the parties. No Party has been induced to enter into this Agreement by, nor is any Party relying upon, any representation or warranty outside those expressly set forth herein.
- 18) **Survival of Terms:** Any terms of this Agreement that by their nature extend beyond the term (or termination) of this Agreement shall remain in effect until fulfilled, and shall apply to both Parties' respective successors and assigns. Such terms include the requirements set forth in Section IV.9.
- 19) Each of the undersigned expressly affirms that he or she is authorized to execute this Agreement on behalf of the Party whom he or she represents.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement by their duly authorized officers.

SIGNATURES:

BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

ALAMEDA-CONTRA COSTA
TRANSIT DISTRICT

by: _____
Jack P. Broadbent
Executive Officer/APCO

by: _____
Michael Hursh
General Manager

Date: _____

Date: _____

Approved as to legal form

Approved as to legal form and content

by: _____
Brian C. Bungler
District Counsel

by: _____
Denise C. Standridge
General Counsel

**ATTACHMENT A
PROJECT SPECIFIC INFORMATION**

(Note: The section numbers shown in parentheses below refer to sections in the Funding Agreement.)

1. **Project Sponsor:** Alameda-Contra Costa Transit District
2. **Project Number (Section IV.5):** 16HDG002
3. **Total Project Cost (Section II.2):** \$13,140,000
4. **Matching Funds (Section II.3):** \$12,140,000
5. **TFCA Funds Awarded (Sections II.3, II.14, III.1, IV.7):** The Air District will fund a portion of the project as shown in Section 6 below, up to a maximum of \$1,000,000. If the Project Sponsor does not fully achieve the requirements described in Attachment B, Usage Requirement or Operational Period, the Air District shall proportionally reduce the amount of TFCA Funds Awarded as described in Section IV. 7. Termination. A. Voluntary. If the Project Sponsor does not fulfill the scrappage requirement, the Air District shall deduct a corresponding amount of the Vehicle Scrapping Bonus specified in Section 6 based on the number of eligible buses actually scrapped.
6. **TFCA Line Item Project Budget (Sections II.2):** TFCA Funds and Project Sponsor’s Matching Funds may only be used to pay for Eligible Costs. The table below shows how funds are allocated to the vehicles in the project.

Line Item	Eligible Cost	TFCA Award
Cost to purchase the 10 zero-emissions hydrogen fuel-cell buses Project buses, including taxes, delivery, and registration fees	Up to \$1,314,000 per bus	The Air District will fund up to 5.7078% of the Eligible Cost of each bus, not to exceed \$75,000 per bus and \$750,000 for ten buses
Vehicle Scrapping Bonus for Scrapped Bus defined in Section 2 of Attachment B		\$25,000 per bus scrapped (10 buses)
Total	Max. \$13,140,000	Max. \$1,000,000

7. **Invoice and Payment Schedule (Sections III.2):** The Project Sponsor will submit one invoice (Final Invoice) for payment after all of the vehicles identified in Attachment B, Project Description, have been purchased and placed into service.

The Invoice shall be prepared on the Air District’s General Invoice Form, and shall include:

- A. The Project Number.
- B. An itemized list of all expenses incurred by the Project Sponsor, specifying which are Eligible Costs.
- C. The total funds being requested.
- D. A copy of each newly acquired vehicle’s registration from the Department of Motor Vehicles.
- E. Supporting documentation of Project Sponsors’ payments made for the purchase of the vehicles, such as copies of receipts or purchase agreements; invoices from vendors, with a description of the vehicles purchased.
- F. Photographs of the Scrapped Bus, including disabled engine block and chassis, as prescribed in Section 8, Special Condition, D below.

The Air District shall retain fifteen percent (15%) of the final TFCA Funds Awarded until the final Annual Report is approved by the Air District.

8. Special Conditions:

- A. Project Sponsor shall maintain, and operate the funded equipment in accordance with all applicable state, federal and local laws and regulations including compliance with all applicable requirements of the Americans with Disabilities Act (ADA) throughout the Project Life.
- B. Project Sponsor shall allow the Air District or its authorized representatives to collect and share usage information about the project.
- C. For compelling reasons, Project Sponsor may seek to amend this Agreement to extend any of deadline dates set forth in the Project Schedule (Attachment B). In no event shall the last day to fulfill Usage Requirements be extended past four years from the date all Project vehicle(s) have been installed and placed into service.
- D. The project sponsor shall scrap the Scrapped Bus and require a certified/licensed vehicle scrapper to physically destroy the frame and engine in such a manner to eliminate the possibility of future operation. The engine block shall be punctured and the truck frame rails shall be cut to ensure that the Scrapped Bus shall not be used again.

**ATTACHMENT B
PROJECT DESCRIPTION**

1. **Project Title:** Replace 10 buses with new MY 2016, or newer, zero-emissions hydrogen fuel-cell buses that have a GVWR equal to or greater than 40,000 pounds.
2. **Project Description:** Project Sponsor shall complete the Project, which comprises (1) the purchase and operation of 10 new Model Year (MY) 2016, or newer, zero-emissions hydrogen fuel-cell buses that with a Gross Vehicle Weight Rating (GVWR) that is equal to or greater than 40,000 lbs., and (2) the scrapping of 10 buses (Scrapped Bus) that meet the following criteria:

Scrapped Bus				
Vehicle Type	GVWR	Engine Fuel Type	Engine Model Year	Engine Horsepower
Transit Bus	33,000lbs.+	Diesel	2002 or 2003	280

The manufacturer of the new Project vehicles must have received written approval from the California Air Resources Board which confirms that the Project vehicles are legal for sale in California, and the Project vehicles do not utilize a combustion engine and do not emit any regulated vehicle exhaust emissions or fuel-based evaporative emissions.

3. **Operational Period:** Each vehicle purchased shall be operated for a minimum of four years within the Air District's jurisdiction.
4. **Usage Requirement:** Each vehicle purchased shall be operated for a minimum of 200,000 miles. Only miles that are driven within the Air District's jurisdiction may be counted toward the Usage Requirement.
5. **Project Useful Life:** The Project Useful Life commences on the day that the first vehicle is placed into service and ends on the date that both the Operational Period and the Usage Requirement for all Project vehicle(s) have been fulfilled.

6. **Project Schedule:** The dates for completing the Milestones shall be the dates specified below, regardless of whether that date falls on a Saturday or holiday.

<u>Milestones</u>	<u>Dates</u>
Begin work on the Project	Effective Date of Agreement
All vehicles purchased and placed into service	By December 31, 2018
Final Invoice & Interim Status Report, per Attachment C	By March 31, 2019
Annual Report	Every March 1, after the Interim Status Report has been submitted for a period of at least 4 years. The final annual report is due by March 1, 2023.
Last day to fulfill Usage Requirement	By December 31, 2022

7. **Project Goal:** The goal of this Project is to reduce on-road vehicle emissions through the deployment of zero-emission electric vehicles.

**ATTACHMENT C
MONITORING OF PROJECT PERFORMANCE**

1. **Semi-annual Reports (Section II.8):** The Project Sponsor shall submit Semi-annual Reports to the Air District summarizing Project progress. Semi-annual Reports shall be prepared on the Air District's Semi-annual Report form.

Due Dates: Beginning 60 calendar days after the commencement of the Term of this Agreement, every April 15, and October 15, following the Effective Date until the Interim Status Report has been submitted.

2. **Interim Status Report (Section II.8):** Once the vehicle(s) are purchased and placed into service, the Project Sponsor shall prepare and submit an Interim Status Report in order to notify the Air District that all of the Project vehicles have been purchased and comply with the Program Requirements. The Interim Status Report shall be prepared on the Air District-approved Interim Status Report form.

Due Date: By March 31, 2019

The Interim Status Report shall include the following information:

- A. A table that shows the following information for each vehicle that was funded through this Project: vehicle make, model number and identification number; date vehicle was purchased; date vehicle was placed into service; starting odometer reading.
 - B. A discussion of any pertinent issues or problems that arose.
 - C. Documentation that the Project Sponsor has acknowledged the Air District as a Project funding source, such as photographs of the charging station(s) with Air District logos attached; documentation of use of the Air District's logo on promotional materials, brochures, handbooks, and maps that promote or inform the public about the Project services; and copies of press releases and newsletter articles related to the Project (Section II.11).
 - D. A receipt, signed by [a licensed vehicle scrapper], affirming having scrapped the Scrapped Bus, including its identified engine, and the date and location of having scrapped it.
3. **Annual Reports (Sections II.8):** Annual Reports shall be prepared on the Air District's Annual Report form.

Due Dates: Every March 1, after the Interim Status Report has been submitted for a period of at least 4 years.

Each Annual Report shall cover a 12-month period (from January 1 to December 31) of the previous year and include the following information for each vehicle:

- A. For each month, the amount of vehicle miles traveled.
- B. A discussion of any pertinent issues or problems that arose during the vehicle(s)'s operation (e.g., repairs, downtime).
- C. A discussion of any work that has been performed to the Vehicle(s) (e.g., maintenance, repair), as well as any expansion.

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**ATTACHMENT D
INSURANCE REQUIREMENTS**

Verification of Coverage

Project Sponsor shall provide the Air District certificates and/or other evidence of the insurance coverage required below. The Air District reserves the right to require Project Sponsor to provide complete, certified copies of any insurance offered in compliance with these specifications. Certificates, policies and other evidence provided shall specify that the Air District shall receive 30 calendar days advanced notice of cancellation from the insurers.

The Project Sponsor may submit evidence that listed insurance is not required for the Project.

Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A: VII. The Air District may, at its sole discretion, waive or alter this requirement or accept self-insurance in lieu of any required policy of insurance.

Minimum Scope of Insurance

Throughout the Project Useful Life, Project Sponsor shall obtain and maintain in full force and effect the insurance as set forth below. Project Sponsor must initial next to each checked insurance requirement to confirm understanding and Agreement with the applicable Project insurance requirements:

**Required
if marked**

1. Liability Insurance

Corporations/Private and Public Entities - a limit of not less than \$1,000,000 per occurrence. Such insurance shall be of the type usual and customary to the business of the Project Sponsor, and to the operation of the vehicles, engines or equipment operated by the Project Sponsor.

Single Vehicle Owners - a limit of not less than \$750,000 per occurrence. Such insurance shall be of the type usual and customary to the business of the Project Sponsor, and to the operation of the vehicles, engines or equipment operated by the Project Sponsor.

2. Property Insurance

Repower and New Vehicle/Equipment Purchase - in an amount of not less than the insurable value of Project Sponsor's vehicles, engines or equipment funded under the Agreement of which this Attachment is a part, and covering all risks of loss, damage or destruction of such vehicles, engines or equipment.

Property Insurance for Retrofit Projects – for all 2003 model year or newer vehicles in an amount of not less than the insurable value of Project Sponsor's vehicles, covering all risks of loss, damage or destruction of such vehicles, engines or equipment.

3. Workers Compensation Insurance.

Workers Compensation Insurance - as required by California law and employers liability insurance with a limit not less than \$1 million.

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