

APPENDIX D-4
Beneficiary Eligible Mitigation Action Certification
State of Hawaii

BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary State of Hawaii

Hawaii Department of Business, Economic Development, and Tourism

Lead Agency Authorized to Act on Behalf of the Beneficiary _____
 (Any authorized person with delegation of such authority to direct the Trustee delivered to the Trustee pursuant to a Delegation of Authority and Certificate of Incumbency)

Action Title:	Action 10 DERA Project 1 - Honolulu Transit Bus Replacement
Beneficiary's Project ID:	VW - 0010 - 0001
Funding Request No.	(sequential) 1
Request Type: (select one or more)	<input type="checkbox"/> Reimbursement <input checked="" type="checkbox"/> Advance <input type="checkbox"/> Other (specify): _____
Payment to be made to: (select one or more)	<input checked="" type="checkbox"/> Beneficiary <input type="checkbox"/> Other (specify): _____
Funding Request & Direction (Attachment A)	<input checked="" type="checkbox"/> Attached to this Certification <input type="checkbox"/> To be Provided Separately

SUMMARY

Eligible Mitigation Action	<input type="checkbox"/> Appendix D-2 item (specify): _____
Action Type	<input checked="" type="checkbox"/> Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal): FY 17/18
Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1):	
<p>Per Hawaii's Beneficiary Mitigation Plan (BMP) Section 6.3.3, this funding request is submitted for Eligible Mitigation Action #10 - DERA Option and seeks to leverage Environmental Mitigation Trust funds as the non-federal voluntary match . This request will support the replacement of two City and County of Honolulu diesel transit buses with two battery electric transit buses under the state's FY 2017/2018 DERA program.</p>	
Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2):	
<p>In partnership with the Department of Business, Economic Development, and Tourism State Energy Office (DBEDT-HSEO), Hawaii Department of Health submitted FY17/18 DERA workplan to the US Environmental Protection Agency (EPA) to replace two City and County of Honolulu diesel transit buses with two battery electric transit buses and charger, utilizing \$230,087 of Trust funds. The two battery electric transit buses will be used to operate the "Downtown Health Circular", a new route dedicated to a loop of downtown medical facilities, providing service to an area that could benefit roughly 20,000 residents and 60,000 employees annually.</p> <p>This FY17/18 DERA bus replacement project is part of a larger statewide battery electric bus replacement program. Hawaii intends to leverage the state's annual DERA allocation by using Trust funds as non-federal voluntary match to receive the EPA bonus match incentive. Hawaii has allocated funds to provide the incremental cost for roughly 16 transit buses. By taking advantage of the EPA bonus match incentive, Hawaii could increase overall EPA funds coming to the state by roughly 17 percent or \$1.375 million. Adding the DERA EPA bonus match incentive to the state's DERA program budget of \$2.75 million results in an incremental contribution to the procurement of all-electric buses in Hawaii of roughly \$4.125 million. The overall project will reduce emissions, improve air quality, and protect public health in targeted residential, rural, and school zones in Hawaii that are more susceptible to criteria air pollutants. Diesel vehicle replacements would reduce diesel particulate matter and greenhouse gas emissions benefiting susceptible communities and improving Hawaii's air quality. The resulting emissions benefits from the EPA bonus match incentive resulting from the utilization of Hawaii's BMP DERA program could effectively increase the state DERA program's emissions benefits by 50 percent.</p>	

Estimate of Anticipated NOx Reductions (5.2.3):

Utilizing the EPA's Diesel Emissions Quantifier, the estimated NOx reductions is 0.997 tons annually and 1.995 tons over the lifetime of the transit bus.

Identification of Governmental Entity Responsible for Reviewing and Auditing Expenditures of Eligible Mitigation Action Funds to Ensure Compliance with Applicable Law (5.2.7.1):

State of Hawaii Department of Business, Economic Development, and Tourism's Hawaii State Energy Office

Describe how the Beneficiary will make documentation publicly available (5.2.7.2).

DBEDT-HSEO created a public website, <http://energy.hawaii.gov/vw-settlement/vw> for information relating to the Trust, the VW Partial Consent Trust Decrees, Hawaii's BMP, and implementation information. To provide transparency and accountability, DBEDT-HSEO will post information on its VW website.

Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8).

Hawaii's requested \$230,087 of Trust funds and FY17/18 DERA allocation will be used to fund up to 45% of eligible activities, matching the minimum mandatory cost share of 55% from participating fleet owners per DERA mandatory cost-share requirements.

Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9).

On February 23, 2018, in accordance with Paragraph 4.2.8 of the Trust Agreement, DBEDT provided a copy of the Trust Agreement with Attachments to the appropriate federal agencies; notified those agencies that DBEDT may request Trust funds for use on lands within federal custody, control, or management (including, but not limited to, Clean Air Act Class I and II areas); and, set forth the procedures by which DBEDT will review, consider, and make a written determination upon requests to use federal lands for Trust-funded projects.

If applicable, describe how the mitigation action will mitigate the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts of such emissions (5.2.10).

Exposure to diesel exhaust can lead to serious health conditions such as asthma and respiratory illnesses and can worsen existing heart and lung diseases, especially in children and the elderly. According to the Hawaii Health Survey, the prevalence of asthma in those 65 years and older has steadily increased since 1998. Replacing heavy-duty diesel vehicles such as school buses and transit buses will reduce diesel particulate matter and greenhouse gas emissions, improve air quality, and protect public health in residential, rural, and school zones in Hawaii that are more susceptible to criteria air pollutants. While deployment location will ultimately determine how the pursued Eligible Mitigation Actions impact air quality in those locations, HSEO estimates to expend nearly 70 percent of its Trust allocation on Eligible Mitigation Actions supporting the electrification of public transit, school buses, or government-owned transportation fleets that may be utilized by historically disadvantaged communities, environmental justice communities of concern, and densely populated regions, regardless of deployment location. For resources and links refer to section 6.3.3.2 in Hawaii's BMP.

ATTACHMENTS
(CHECK BOX IF ATTACHED)

- | | | |
|-------------------------------------|---------------------|---|
| <input checked="" type="checkbox"/> | Attachment A | Funding Request and Direction. |
| <input checked="" type="checkbox"/> | Attachment B | Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4). |
| <input checked="" type="checkbox"/> | Attachment C | Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11). |
| <input checked="" type="checkbox"/> | Attachment D | Detailed cost estimates from selected or potential vendors for each proposed expenditure exceeding \$25,000 (5.2.6). [Attach only if project involves vendor expenditures exceeding \$25,000.] |
| <input checked="" type="checkbox"/> | Attachment E | DERA Option (5.2.12). [Attach only if using DERA option.] |
| <input type="checkbox"/> | Attachment F | Attachment specifying amount of requested funding to be debited against each beneficiary's allocation (5.2.13). [Attach only if this is a joint application involving multiple beneficiaries.] |

CERTIFICATIONS

By submitting this application, the Lead Agency makes the following certifications:

1. This application is submitted on behalf of Beneficiary State of Hawaii, and the person executing this certification has authority to make this certification on behalf of the Lead Agency and Beneficiary, pursuant to the Certification for Beneficiary Status filed with the Court.
2. Beneficiary requests and directs that the Trustee make the payments described in this application and Attachment A to this Form.
3. This application contains all information and certifications required by Paragraph 5.2 of the Trust Agreement, and the Trustee may rely on this application, Attachment A, and related certifications in making disbursements of trust funds for the aforementioned Project ID.
4. Any vendors were or will be selected in accordance with a jurisdiction's public contracting law as applicable. (5.2.5)
5. Beneficiary will maintain and make publicly available all documentation submitted in

support of this funding request and all records supporting all expenditures of eligible mitigation action funds subject to applicable laws governing the publication of confidential business information and personally identifiable information. (5.2.7.2)

DATED: 5/16/19

Carilyn O. Shon
Energy Program Administrator, Hawaii State Energy Office

[NAME]

[TITLE]

Hawaii Department of Business, Economic Development, and Tourism
- State Energy Office

[LEAD AGENCY]

for

State of Hawaii

[BENEFICIARY]



[SIGNATURE]

Attachment B

Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4)

Hawaii Funding Request #1: Action 10 DERA Project 1 – Honolulu Transit Bus Replacement

Beneficiary's Project ID: VW – 0010 - 0001

PROJECT MANAGEMENT PLAN

Hawaii's Beneficiary Mitigation Plan allocates approximately \$2.75 million or 34 percent of Trust Funds to projects which contribute to Hawaii's Diesel Emission Reduction Act (DERA) program, Environmental Mitigation Action #10. The Hawaii Department of Business Economic Development and Tourism Hawaii State Energy Office (DBEDT-HSEO) is submitting its first D-4 funding request to the Trustee for \$230,087; which is approximately 8% of the \$2.75 million DERA program allocation.

In late 2019, The City and County of Honolulu, Department of Transit Services (DTS) and Oahu Transit Services (OTS) will introduce a new bus route for TheBus to be named "the Downtown Health Circular". The three-mile circular route will operate with two (2) buses and will provide service to roughly 20,000 residents and 60,000 employees annually. The route will service The Queen's Medical Center, Hawaii Pacific University, John A. Burns School of Medicine, as well as *kupuna* (elderly) housing units. The route will also link to the future Honolulu Authority for Rapid Transportation (HART) electrified transit rail system. Annual operating budget for the bus route is estimated at \$424,000.

The City and County of Honolulu, DTS and OTS, plan to operate the route with two (2) battery electric buses. DBEDT-HSEO plans to utilize VW Trust Funds and Department of Health, Clean Air Branch (DOH-CAB) DERA funds to assist with the procurement of two (2) battery electric buses and charging equipment for the buses.

DOH-CAB, which administers Hawaii's State DERA Allocation, was granted an extension for the DERA FY 2017 and DERA FY 2018 funds, extending the project end date to March 31, 2020. The DERA FY 2017/FY 2018 project includes the transit bus replacements for the City and County of Honolulu's new "Downtown Health Circular" Electric Bus Route.

Project schedule and milestones, budget, and trust allocations included below.

PROJECT SCHEDULE AND MILESTONES

Milestone	Estimated Date
DERA FY17/18 Quarterly Report #3 Due to EPA	June 30, 2019
City and County battery electric bus procurement contract finalized	August 2019
DERA FY17/18 Quarterly Report #4 Due to EPA	September 30, 2019
City and County battery electric transit buses delivered	November 2019
Hawaii State Energy Office submits Progress Report #1 to VW Trustee	December 2019
City and County submits evidence of bus scrapping, invoices and other documents required for DERA reimbursement	January 2020
Project period for DERA FY17/18 award ends	March 31, 2020
DERA FY17/18 Final Report Due to EPA	June 30, 2020
Hawaii State Energy Office reports to VW Trustee on status of an expenditures with Mitigation Actions completed and underway	July 30, 2020

PROJECT BUDGET

Period of Performance: May 2019 - March 2020				
Budget Category	Total Approved Budget	Share of Total Budget to be Funded by the Trust	Cost-Share, DERA FY17/18 EPA Allocation	Cost-Share, City and County of Honolulu
Equipment Expenditure	\$ 1,558,513	\$ 195,574	\$ 471,244	\$ 857,182
Administrative @ 15%		\$ 34,513	\$ -	
Project Totals				
Percentage	100%	15%	30%	55%

DERA FY17/18 Project			
Two (2) 29 ft battery electric transit bus replacements and charger			
description	quantity	unit cost	total cost
Battery electric bus	2	\$ 670,000	\$ 1,340,000
charger	1	\$ 150,000	\$ 150,000
shipping	2	\$ 17,000	\$ 34,000
administrative (15% of VW funds)			\$ 34,513
Total Project Cost			\$ 1,558,513
Federal/State Funds @ 45%			\$ 701,331
VW funds - voluntary match			\$ 230,087
EPA DERA FY 17 allocation			\$ 83,771
EPA DERA FY 17 - bonus incentive			\$ 113,088
EPA DERA FY 18 allocation			\$ 274,385
Mandatory Cost-Share @ 55%			\$ 857,182

PROJECTED TRUST ALLOCATIONS

	2019
1. Anticipated Annual Project Funding Request to be paid through the Trust	\$ 230,087
2. Anticipated Annual Cost Share	\$ 1,297,825
3. Anticipated Total Project Funding by Year	\$ 1,527,912
4. Cumulative Trustee Payments Made to Date Against Cumulative Approved Beneficiary Allocation	\$ -
5. Current Beneficiary Project Funding to be paid through the Trust	\$ 230,087
6. Total Funding Allocated to Beneficiary, inclusive of Current Action by Year	\$ 230,087
7. Beneficiary Share of estimated Funds Remaining in Trust	\$ 8,125,000
8. Net Beneficiary Funds Remaining in trust, net cumulative Beneficiary Funding Actions	\$ 7,894,913

Attachment C

Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11)

Consistent with 5.2.11 of the Environmental Mitigation Trust Agreement for State Beneficiaries (Trust), Beneficiaries must submit with their Appendix D-4 request for Eligible Mitigation Action funding a detailed plan for reporting on Eligible Mitigation Action implementation. The Hawaii Department of Business, Economic Development, and Tourism Hawaii State Energy Office (DBEDT-HSEO) intends to achieve the Beneficiary Reporting Obligations as outlined with 5.3 of the Trust.

DBEDT-HSEO is devoted to carrying out the reporting requirements of the Trust, according to 5.3, Beneficiary Reporting Obligations, as described below:

For each Eligible Mitigation Action, no later than six months after receiving its first disbursement of Trust Assets, and thereafter no later than January 30 (for the preceding six-month period of July 1 to December 31) and July 30 (for the preceding six-month period of January 1 to June 30) of each year, each Beneficiary shall submit to the Trustee a semiannual report describing the progress of implementing each Eligible Mitigation Action during the six-month period leading up the reporting date (including a summary of all costs expended on the Eligible Mitigation Action through the reporting date). Such reports shall include a complete description of the status (including actual or projected termination date), development, implementation, and any modification of each approved Eligible Mitigation Action. Beneficiaries may group multiple Eligible Mitigation Actions and multiple sub-beneficiaries into a single report. These reports shall be signed by an official with the authority to submit the report for the Beneficiary and must contain an attestation that the information is true and correct and that the submission is made under penalty of perjury. To the extent a Beneficiary avails itself of the DERA Option described in Appendix D-2, that Beneficiary may submit its DERA Quarterly Programmatic reports in satisfaction of its obligations under this Paragraph as to those Eligible Mitigation actions funded through the DERA Option. The Trustee shall post each semiannual report on the State Trusts public-facing website upon receipt.

Furthermore, in addition to the semiannual reporting to the Trustee, DBEDT-HSEO in partnership with the Department of Health, Clean Air Branch (DOH-CAB) will submit quarterly and final reports to the EPA during the project period as required by the DERA FY 17/18 State Clean Diesel Grant Program Guide described below:

- I. **Reporting Requirements:** Quarterly programmatic progress reports and a detailed final programmatic report will be required. Additional administrative and financial reporting may be required per the terms and conditions of the award.

1. **Quarterly Reports:** Quarterly report summarizing technical progress, planned activities for the next quarter and a summary of expenditures are required. The schedule for submission of quarterly reports will be established by EPA, after the grants are awarded. A template for the quarterly report will be available at www.epa.gov/cleandiesel/clean-diesel-state-allocations.

2. **Final Reports:** The final report must include: summary of the project or activity, emissions benefits and other outputs and outcomes achieved, and costs of the project or activity addition, the final report shall discuss the problems, successes, and lessons learned from the project or activity that could help overcome structural, organizational or technical obstacles to implementing a similar project elsewhere. Award recipients may be provided with additional information and guidance on reporting performance measures and project progress after award. A template for the final reports is available at www.epa.gov/cleandiesel/clean-diesel-state-allocations. The final report shall be submitted to EPA within 90 calendar days of the completion of the period of performance (no later than June 30, 2020).

Attachment D

Detailed cost estimates from selected or potential vendors for each proposed expenditure exceeding \$ 25,000 (5.2.6)

Transit Bus Replacement Projects:

<u>Bus Style</u>	<u>Bus Cost</u>	<u>Charging Equipment Cost</u>
Battery Electric – 29 ft	\$ 670,000	\$ 150,000
Battery Electric – 35 ft	\$ 740,000	\$ 150,000
Battery Electric – 40 ft	\$ 798,000	\$ 50,000

Estimated costs reflect informal quotes collected during research and discussions with battery electric bus vendors. Contact details are withheld to conform with Hawaii State and County procurement laws. Estimated costs do not include shipping expenses.

FISCAL YEAR 2018

STATE CLEAN DIESEL GRANT PROGRAM

WORK PLAN AND BUDGET NARRATIVE TEMPLATE

Proposed revision: May 16, 2019

SUMMARY PAGE

Project Title: Hawaii Diesel Vehicle Replacement 2017 - 2018

Project Manager and Contact Information

Organization Name: Hawaii Clean Air Branch

Project Manager: Barry Ching

**Mailing Address: State of Hawaii; Clean Air Branch; 2827 Waimano Home Rd. #130;
Pearl City, HI 96782**

Phone: (808) 586-4200

Fax: (808) 586-4359

Email: barry.ching@doh.hawaii.gov

Project Budget Overview:

	FY17*	FY18	FY17+18
EPA Base Allocation	\$ 226,175	\$ 274,385	\$ 500,560
State or Territory Matching Funds (if applicable)	\$ 230,087		\$ 226,175
EPA Match Incentive (if applicable)	\$ 113,088		\$ 113,088
Mandatory Cost-Share	\$ 824,042	\$ 460,350	\$ 1,284,392
TOTAL Project	\$ 1,393,392	\$ 734,735	\$ 2,128,127

*FY17 budget is only for states and territories with open FY17 State DERA grants

Project Period

October 1, 2018 – March 31, 2020

Summary Statement

For a portion of the FY17 funds, the Hawaii Department of Health (DOH), Clean Air Branch (DOH-CAB) will partner with the City and County of Honolulu, Board of Water Supply (BWS) to replace heavy-duty vehicles within the state of Hawaii. In partnership with the Hawaii Department of Business Economic Development and Tourism (DBEDT), Energy Office (DBEDT-HSEO), the Hawaii State VW Mitigation Settlement fund will provide the voluntary match funds. The remaining FY17 and the FY18 funds with the match funds will go towards the replacement of two (2) diesel transit buses with two (2) all-electric transit buses and one electric

bus charger operated and maintained by the City and County of Honolulu Department of Transportation Services.

SCOPE OF WORK

The BWS portion of the project is for the early replacement of five (5) Class 5 and above trucks that were delivered in 2007 or earlier. The proposed target fleet includes, or would be similar to, the trucks listed in Table 1 as the target vehicles. In June 2018, prior to the approval of this FY18 work plan, that FY17 BWS project received a no-cost extension to September 30, 2019. In April 2019, the BWS requested an additional six-month extension to March 31, 2020.

The project of replacing two buses with all-electric replacements is for diesel buses delivered in 2007 or earlier. The project will work with the City and County of Honolulu Department of Transportation Services (DTS) to replace two existing older, higher polluting diesel transit buses within their fleet with two less polluting, all-electric buses and one electric bus charger. These transit bus replacements would support the City and County fleet transitions to cleaner vehicle technologies and provide clean air and socioeconomic benefits to communities in Hawaii. This project will work in partnership with DBEDT-HSEO and comply with city and state rules and guidelines.

These projects will comply with the FY17 & FY18 State Clean Diesel Grant Program Guidelines.

Table 1. BWS Proposed Replacements.

<u>Equip ID</u>	<u>Model year</u>	<u>Mfr ID</u>	<u>Model ID</u>	<u>Usage (Annual miles)</u>	<u>Current Equipment GVWR</u>	<u>Eligible Equipment Description</u>	<u>Replacement Equipment Description</u>	<u>Replacement GVWR</u>	<u>Replacement MY</u>	<u>Vendor</u>
BWS717	2006	INTL	7400	5,400 miles	33,000	5 CY DUMP TRUCK	5 CY DUMP TRUCK	33,000	2019	FREIGHTLINER OF HAWAII
BWS895	2000	GMC	C6500	2,700 miles	33,000	3 CY DT CRANE	5 CY DUMP TRUCK	33,000	2019	FREIGHTLINER OF HAWAII
BWS917	2005	INTL	4400	2,400 miles	33,000	4 CY DUMP TRUCK	5 CY DUMP TRUCK	33,000	2019	FREIGHTLINER OF HAWAII
BWS779	2002	INTL	4900	1,600 miles	31,000	MASON BODY TRUCK	2 CY DUMP TRUCK	18,000	2019	CUTTER FORD
BWS852	2003	FORD	F550	4,600 miles	17,500	1 1/2 T F/B WELDERS TRUCK	1 1/2 T F/B WELDERS TRUCK	18,000	2019	CUTTER FORD

Table 1. C&C DTS Proposed Replacements.

<u>Equip ID</u>	<u>Model year</u>	<u>Mfr ID</u>	<u>Model ID</u>	<u>Usage (Annual miles)</u>	<u>Current Equipment GVWR</u>	<u>Eligible Equipment Description</u>	<u>Replacement Equipment Description</u>	<u>Replacement GVWR</u>	<u>Replacement MY</u>	<u>Vendor</u>
BUS032	2002	OPUS	LFB29	23,500	29,000	ALL-ELECTRIC BUS + CHARGING EQUIPMENT	ALL-ELECTRIC TRANSIT BUS + CHARGING EQUIPMENT		2019	
BUS036	2002	OPUS	LFB29	23,500	29,000	ALL-ELECTRIC BUS + CHARGING EQUIPMENT	ALL-ELECTRIC TRANSIT BUS + CHARGING EQUIPMENT		2019	

STATE GOALS AND PRIORITIES:

1. Public health benefits

According to the most recent Hawaii Health Survey, the prevalence of asthma in the ≥ 65 year old category has steadily increased since 1998. It is expected that reductions in diesel particulate matter associated with DPF retrofits will benefit this group.

2. Fleet Electrification

All-electric buses of all types represent a beachhead that has strong potential to transfer and spread to broader applications. This project supports the early adoption of zero-emission technology, increases economies of scale to help bring down technology costs, and reduces harmful exposure for the State's most sensitive populations.

3. Affected Areas

The City and County of Honolulu is Hawaii's largest metropolitan area, with a population of 905,601 plus 7,496,820 visitor arrivals, including five million from the U.S. Mainland and the balance international, per year, based on 2008 population and 2007 visitor statistics. As of the 2000 census, Honolulu has a population density of 4,336.6 people per square mile. Unique in the 50 states, vog (volcanic smog) emitted from the active Kilauea volcano, also impacts air quality throughout Hawaii. This mixture of sulfur dioxide and aerosols, formed when volcanic gas reacts with moisture and oxygen, is readily retained by the lungs and is potentially more harmful than either gases or particles alone. On certain days when the typical trade winds do not blow, vog may migrate north from Kilauea and cause a significant impact on air quality in Honolulu County.

4. Air pollution from diesel fleets

The BWS target fleet comprises heavy duty vehicles owned by a local government agency which are operated in and around residential areas. They may idle to perform their function, examples would be repair vehicles for water supply or sewers as well as refuse vehicles. This exposes residents, neighborhood school age children walking to school on a collection day or both groups driving past such collections. The electric buses are used to transport passengers varying distances on a frequent schedule.

The BWS target fleet emissions reductions have been quantified. For the electric buses, the emissions benefit summary output will be calculated on the DEQ using the data from the actual vehicles replaced. The overall emission reductions and cost effectiveness will be calculated as well.

VEHICLES AND TECHNOLOGIES:

See Table 1 for the BWS fleet. Technology is vehicle replacements. Only EPA/CARB certified engines may be used, except for the electric bus replacements. These projects will comply with the FY17 & FY18 State Clean Diesel Grant Program Guidelines.

Nonroad and highway diesel vehicles and equipment can be replaced under the DERA program with newer, cleaner vehicles and equipment that operate on diesel or alternative fuels and use

engines certified by EPA and CARB to meet a more stringent set of engine emission standards. Noting that, all-electric (i.e. zero emission) vehicles and equipment do not require EPA or CARB certification. For the purposes of this program, buses include) medium and heavy-duty transit buses Classes 5-8.

All-electric transit buses are a market ready segment of eligible medium and heavy-duty vehicles which have a material footprint in public fleets. According to the CARB's most recent assessment, all-electric transit buses have reached the commercial stage. CARB reports that all major North American bus makers are producing full-sized battery-electric transit buses, and nearly 20 different models are available. CARB characterizes these transit buses as a "beachhead technology" that will serve as a launch point for development of battery electric shuttle buses, school buses, and delivery vehicles.

ROLES AND RESPONSIBILITIES:

The Project Team administering and reporting all DERA activities includes the DOH-CAB, DBEDT-HSEO and the sub-grantee as described below.

- DOH-CAB will retain all reporting responsibilities required by the original grant and EPA.
- DBEDT-HSEO will act as the "pass-through entity" offering "interagency services" to DOH-CAB. Noting that the state itself is the legal entity that receives EPA DERA funds even if one particular component of the state is named in the assistance agreement as the recipient.
- DOH-CAB and DBEDT-HSEO will provide technical assistance and guidance as needed to the sub-grantee to ensure that required tasks and implementation are accomplished in a timely manner. The sub-grantee will be the City and County of Honolulu, Department of Transportation Services.

The sub-grantee will be responsible for procuring the replacement buses and will seek bids from vendors as appropriate for the following tasks:

- Throughout the project, convene regular meetings with the Project Team and submit a projected work plan and timeline listing all and any activities in chronological order to be undertaken for procuring and replacing older diesel-fueled buses operated by the sub-grantee. The replacement of vehicles must be done with newer, cleaner diesel, electric, hybrid or alternative fuel EPA certified or CARB-certified diesel engines.
- The DERA funds will pay for up to 25% of the cost of a replacement vehicle powered by a 2017 model year or newer engine certified to EPA emission standards and up to 45% of the cost of an all-electric replacement vehicle. The sub-grantee will be responsible for any remaining mandatory cost-share requirements.
- The sub-grantee will designate one point of contact to respond to queries and provide non-sensitive information to other organizations undertaking vehicle replacement projects from the beginning of the project, and one year after its conclusion. The point of contact

will present information to interested groups and the media on the retrofit and replacement projects during the same period.

- Upon delivery and acceptance of the replacement vehicles, the sub-grantee shall maintain records for a minimum of 3 years for each vehicle the vehicles' miles travelled monthly, fuel consumption, and any other records agreed upon by the department relating to air emissions or required by EPA for the DERA grant. These records will be summarized and submitted annually to the DOH.

TIMELINE AND MILESTONES:

Table 2. Project Timeline and Milestones		
Date	Milestone Description	Quarter(s)/ Due Date for Quarterly Report
October 1, 2018	<i>Phase I: Candidate Vehicles reviewed and approved by EPA. Sub-grant agreement routed and signed by sub-grantee and DOH.</i>	1st Quarter, January 30, 2019
December 31, 2018	<i>Phase II: Procurement process begins.</i>	2nd Quarter, April 30, 2019
February 28, 2019	<i>Phase III. Replacement bid awarded.</i>	3rd Quarter, June 30, 2019
December 30, 2019	<i>Delivery and acceptance completed. Destruction of old vehicles.</i>	4th Quarter, September 30, 2019
March 31, 2020	<i>Drawdown request submitted. Drawdown completed. Final report submitted.</i>	Final Report, June 30, 2020

DERA PROGRAMMATIC PRIORITIES:

The proposed projects focus on reducing exposure to diesel exhaust and protecting public health in Hawaii by replacing transit buses and public works vehicles. These projects will achieve significant diesel emission reductions, the magnitude of which is estimated in Table 3.

EPA'S STRATEGIC PLAN LINKAGE AND ANTICIPATED OUTCOMES/OUTPUTS:

1. Linkage to EPA Strategic Plan

This project supports Goal 1, Objective 1.2, ‘Improve Air Quality,’ of the EPA’s 2018 – 2022 Strategic Plan because it is attempting to reduce emissions for diesel fleets operating, primarily, on the most populous island in the state of Hawaii, Oahu. Specifically, it is targeting trucks that operate in and around residential, rural and smaller areas and that idle near and around homes and schools as they do their daily tasks. For this fleet, The Hawaii Replacement 2017-2018 project will improve air quality and protect public health in Hawaii by reducing emissions from existing diesel vehicles which do not have Model Year 2007 controls.

2. **Outputs**

The expected outputs of the program have been quantified by the expected number of retrofits and estimated emissions reductions. The targeted number of vehicles that could be replaced are five (5) trucks and two (2) buses.

The second quantifiable output is the estimated emissions reductions due to exhaust retrofits. The EPA Diesel Emissions Quantifier (DEQ) was used to estimate the reduction of criteria pollutants. In order to use the DEQ, assumptions had to be made about the number of vehicles replaced, the average model year, the average vehicle miles traveled (VMT), the average idle time, and average annual diesel gallons consumed. The outputs are summarized in Table 3. Once the replacements are completed, the actual VMT will be inputted into the DEQ to estimate pollutant reductions and other related estimates.

Outcomes

Table 3. Outcomes			
Activities	Inputs	Outputs	Outcomes
Replace 5 trucks	EPA funds = \$162,189 Matching funds (sub-grantee) = 427,209	Total # of replacements = 5	Annual NOx reduction = 0.849 tons Lifetime = 4.247 tons Annual PM 2.5 emission reduction = 0.037 tons. Lifetime = 0.186 tons Annual HC emission reduction = 0.106 tons. Lifetime = 0.507 tons Annual CO emission reduction = 0.287 tons. Lifetime = 1.434 tons Annual CO2 emission reductions = 9.7 tons Lifetime = 48.7 tons
Replace 2 buses	EPA funds = \$471,244 State match = \$226,175 Matching funds (sub-grantee) = \$852,400	Total # of replacements = 2	Annual NOx reductions = 0.997 tons Lifetime = 1.995 tons Annual PM2.5 reduction = 0.022 tons Lifetime = 0.043 tons Annual HC emission reduction = 0.085 tons. Lifetime = 0.169 tons Annual CO emission reduction = 0.469 tons Lifetime = 0.937 tons Annual CO2 emission reduction = 137.9 tons Lifetime = 275.9 tons
Share & distribute project information via outreach, websites, and publications. Overall project management.	No funds allocated	Information posted on 2 websites	Increased public awareness of the project and results. Possible adoption of diesel emission reduction technologies by public/private diesel fleets in Hawaii.

SUSTAINABILITY OF THE PROGRAM:

See Table 3 above.

Hawaii has no mandated vehicle retrofitting or any pending legislation for other diesel reduction technology for the target fleet. Therefore, the replacements would not have occurred during the project period had DERA involvement not been provided. Sustainability of the program will depend on acquiring additional funding, examining and then expanding the interest in the community and finding project partners. The DERA program is a major resource to transition diesel vehicles within the state's fleet. The Hawaii DOH-CAB and DBEDT-HSEO are currently exploring the potential of a long-term program to administer DERA funds, utilize other clean transportation funding resources, and partner with other state departments to sustain project goals and efforts beyond the current assistance period.

BUDGET NARRATIVE

Itemized Project Budget

The Itemized Budget is provided based on the FY17 and FY18 totals. Tables 4–6 set forth the funding by fiscal year, but in actual practice, a portion of FY17 funds will cover tasks in FY18. Because this is an assistance amendment and DOH will be continuing with electric bus replacements, DOH has shown the breakdown in Table 7 according to project type where FY17 primarily reflects the BWS replacement project and FY18 includes the three all-electric bus projects from both fiscal years.

Table 4. Budget Summary and Overview.

	FY17	FY18	FY17+18
EPA Base Allocation	\$226,175	\$274,385	\$500,560
State or Territory Matching Funds (if applicable)	\$230,087		\$230,087
EPA Match Incentive (if applicable)	\$113,088		\$113,088
Mandatory Cost-Share	\$824,042	\$460,350	\$1,284,392
TOTAL Project	\$1,393,392	\$734,735	\$2,128,127

Table 5. FY18 Budget

Federal FY18				
Budget Category	EPA Allocation	Voluntary Match	Mandatory Cost-Share *	Total
1. Personnel				
2. Fringe Benefits				
3. Travel				
4. Supplies				
5. Equipment				
6. Contractual				
7. Program Income				
8. Other Sub-award * (1 all-electric buses)	\$ 274,385		\$ 460,350	\$ 734,735
9. Total Direct Charges	\$ 274,385		\$ 460,350	\$ 734,735
10. Indirect Charges				
Total	\$ 274,385		\$ 460,350	\$ 734,735

* The mandatory cost share is projected for one (1) all-electric buses and one electric bus charger.

Table 6. FY17 Budget – Updated

Federal FY17				
Budget Category	EPA Allocation	Voluntary Match	Mandatory Cost-Share *	Total
1. Personnel		\$ 21,560		\$ 21,560
2. Fringe Benefits		\$ 12,953		\$ 12,953
3. Travel				
4. Supplies				
5. Equipment				
Other				
6. Contractual				
7. Program Income				
8. Other Sub-award (5 BWS vehicles and 1 all-electric bus)	\$ 339,263	\$ 195,574	\$ 824,042	\$ 1,358,879
9. Total Direct Charges	\$ 339,263	\$ 230,087	\$ 824,042	\$ 1,393,392
10. Indirect Charges				
Total	\$ 339,263	\$ 230,087	\$ 824,042	\$ 1,393,392

* The sum of the cost share for the five (5) BWS vehicles and the projected cost share for one (1) all-electric bus.

Table 7. Itemized Project Budget

Budget Category	FY17 BWS Replacement*			FY18 Battery-Electric Buses			Total
	EPA Allocation	Voluntary Match (if applicable)	Mandatory Cost-Share (if applicable)	EPA Allocation (+remaining FY17)	Voluntary Match (+remaining FY17)	Mandatory Cost-Share (if applicable)	
1. Personnel					\$ 21,560		\$ 21,560
2. Fringe Benefits					\$ 12,953		\$ 12,953
3. Travel							
4. Supplies							
5. Equipment							
Other							
6. Contractual							
7. Program Income							
8. Other Sub-award				\$ 471,244	\$ 195,574	\$ 857,182	\$ 1,524,000
9. Total Direct Charges				\$ 471,244	\$ 230,087	\$ 857,182	\$ 1,558,513
10. Indirect Charges							
Total				\$ 471,244	\$ 230,087	\$ 857,182	\$ 1,558,513

*FY17 budget is only for states and territories with open FY17 State DERA grants

Table 8. FY17 BWS Sub-award Breakdown of Costs:

<u>Replacement MY</u>	<u>Vendor</u>	<u>~ Total Cost for Replacement Vehicle (\$)</u>	<u>Federal /State funds</u>	<u>Mandatory Cost-Share</u>
2019	<u>FREIGHTLINER OF HAWAII</u>	124,315	31,079	93,236
2019	<u>FREIGHTLINER OF HAWAII</u>	124,315	31,079	93,236
2019	<u>FREIGHTLINER OF HAWAII</u>	124,315	31,079	93,236
2019	<u>CUTTER FORD</u>	78,005	19,501	58,504
2019	<u>CUTTER FORD</u>	118,663	29,666	88,997
	TOTAL	\$ 569,613	\$ 142,403	\$ 427,209

Table 9. FY17+18 All-Electric Bus Breakdown of Costs:

<u>Vendor</u>	<u>~ Total Cost for Replacement Vehicle (\$)</u>	<u>Federal + State funds</u>	<u>Mandatory Cost-Share</u>
<u>TBD</u>	687,000	309,150	377,850
<u>TBD</u>	687,000	309,150	377,850
<u>TBD</u>	150,000 (Charing Equipment)	67,500	82,500
TOTAL	\$ 1,524,000	\$ 685,800	\$ 838,200

Explanation of Budget Framework

1. Personnel

Personnel costs include one DBEDT-HSEO Energy Analyst at a salary equivalent to SR-22 (annual salary range as of July 1, 2017: \$51,792 to \$76,692).

2. Fringe Benefit

The Hawaii Department of Budget and Finance Memo 187-124 (October 4, 2017 July 19, 2018) set the FY18 FY19 Revised Interim Fringe Benefit rate at 60.08%. The interim rate is based on the FY18 composite fringe benefit rate that is approved by the U.S. Department of Health and Human Services.

Administrative Costs Expense Cap

FY17 and FY18 state allocations' administrative costs are approximately 2.21% of the project costs, respectively.

Matching Funds and Cost-Share Funds

In 2017, DBEDT was designated as the lead agency for purposes of administering the VW Trust allocation for the State of Hawaii. The DERA FY17 voluntary state match will come from Hawaii's VW Environmental Mitigation Settlement Trust Funds.

Funding Partnerships

For both FY17 and FY18, the target replacement vehicles are not and will not be owned by the DOH or DBEDT. Sub-awards have been and will be issued to sub-grantees. As stated above, in FY17, the sub-grantee is the City and County of Honolulu, Board of Water Supply and, in FY18, the sub-grantee is the City and County of Honolulu, Department of Transportation Services.