

APPENDIX D-4
Beneficiary Eligible Mitigation Action Certification

BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary State of North Carolina

Lead Agency Authorized to Act on Behalf of the Beneficiary North Carolina Department of Environmental Quality
(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:	Freight Switchers
Beneficiary's Project ID:	NCDEQ-FREIGHT-SWITCHERS-FY22
Funding Request No.	<i>(sequential)</i> 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 checked="" type="checkbox"/> Appendix D-2 item (specify): <u>3. Freight Switchers</u>
Action Type	<input type="checkbox"/> Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal):
Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1): See attached.	
Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2): See attached.	
Estimate of Anticipated NOx Reductions (5.2.3): See attached.	
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): See attached.	
Describe how the Beneficiary will make documentation publicly available (5.2.7.2). See attached.	
Describe any cost share requirement to be placed on each NOx source proposed to be mitigated (5.2.8). See attached.	
Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S. Government Agencies (5.2.9). See attached.	

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).

See attached

ATTACHMENTS
(CHECK BOX IF ATTACHED)

- Attachment A Funding Request and Direction.
- Attachment B Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4).
- Attachment C Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11).
- 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.]
- Attachment E DERA Option (5.2.12). [Attach only if using DERA option.]
- 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.]

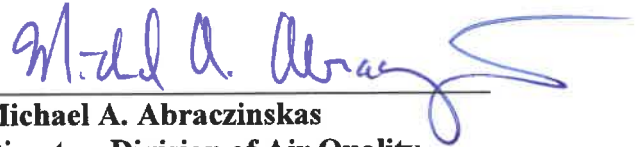
CERTIFICATIONS

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

1. This application is submitted on behalf of Beneficiary North Carolina Department of Environmental Quality, 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: 8/25/22



Michael A. Abraczinskas
Director, Division of Air Quality
Department of Environmental Quality

[LEAD AGENCY]

for

State of North Carolina

[BENEFICIARY]

D-4 Summary Attachment

Explanation of how funding request fits into Beneficiary's Mitigation Plan (5.2.1):

The North Carolina Department of Environmental Quality (NC DEQ) requests \$4,416,386.00 in funds for the replacement of two diesel freight switchers. Projects funded under this request will help achieve significant NOx emission reductions. (Page 9, State of North Carolina Volkswagen Mitigation Plan)

NC DEQ received an application for the replacement of one diesel freight switcher with a remanufactured repowered electric freight switcher and the repower of one diesel freight switcher to electric power.

Vehicle Type	Fuel Type	Estimated Number of Vehicles	Total Replacement Cost
Freight Switcher	Electric	1	\$3,401,024.00
	Electric	1	\$3,321,024.00
Total		2	\$6,722,048.00

Detailed Description of Mitigation Action Item Including Community and Air Quality Benefits (5.2.2):

This category includes the replacement and repower of diesel freight switchers. This project will be located in an identified historically under-resourced county.

NC DEQ estimates the following emissions reductions because of these vehicle replacements projects:

Vehicle Type	Fuel Type	Pollutant (Estimated Lifetime Emissions)		
		NOx (tons)	PM2.5 (tons)	GHG* (tons)
Freight Switcher	Electric	52.0	1.11	3,375.0
	Electric	41.6	0.88	3,375.0
Total		93.6	1.99	6,750.0

*Measured as CO₂

Estimate of Anticipated NOx Reductions (5.2.3):

Based on emissions reduction calculations from the EPA Diesel Emissions Quantifier, the estimated total lifetime NOx emissions is 93.6 tons for the replacement vehicles.

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):

NC Department of Environmental Quality

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

The NC DEQ, as lead agency for the state of North Carolina implementing the Environmental Mitigation Plan, has established a web page on the VW Trust and mitigation actions where documents will be made publicly available, deq.nc.gov/VWsettlement.

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

Maximum funding percentages for selected projects depend on the Eligible Mitigation Action type, the fuel type of the replacement/repower (diesel, alternative fuel, and all-electric), and whether it is a

government (public) or nonprofit (private) owned fleet; however, maximum funding for any project proposal application is not guaranteed. NC DEQ may partially fund a proposal application by funding a portion of a proposed project. Applicants receiving funding will be notified of the actual amount awarded for their project. Applicants awarded funding have the option to accept or decline the award.

Public-private partnerships are agreements that involve a contract between a public-sector authority and a private party, in which the private party provides a public-sector service or project and assumes substantial financial, technical, and operational risk in the project. For projects that are public-private partnerships, the ownership of the original and replacement equipment or vehicle will determine the maximum funding percentages. Public-private partnership projects where the original and replacement equipment or vehicle is owned by the public entity will be eligible for the maximum funding percentages allowed under government-owned vehicle categories found in the tables below. Public-private partnership projects where the original and replacement equipment or vehicle is owned by the private entity will be eligible for the maximum funding percentages allowed under non-government categories found in the tables below.

Freight Switchers*

Replacement	Diesel	Alternative Fuel	All-Electric
Government	100%	100%	100%
Non-Government	25%	25%	75%

Repower	Diesel	Alternative Fuel	All-Electric
Government	100%	100%	100%
Non-Government	40%	40%	75%

*Eligible freight switchers include pre-Tier 4 switcher locomotives that operate 1,000 or more hours per year.

Payments will be made on a reimbursement basis for eligible expenses incurred and paid by the grant recipient. A cost may not be considered incurred until the grant funded goods and services have been received and accepted by the grant recipient. Grant recipients will be required to provide documentation to show that equipment or services have been received and the expenses have been incurred and paid by the grant recipient before reimbursement is provided by the NC DEQ.

Describe how the Beneficiary complied with subparagraph 4.2.8, related to notice to U.S.

Government Agencies (5.2.9):

On February 27, 2018, the NC DEQ sent e-mail notices of the availability of funds to representatives of the U.S. Department of Interior and the U.S. Department of Agriculture listed in subparagraph 4.2.8 of the Trust Agreement.

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):

To determine environmental justice (EJ) scores for the purpose of ranking and rating vehicles and projects, the following analysis was done at the block group level using the 2019 American Community Survey (ACS) five-year estimates. The ACS is a demographic survey conducted each year by the U.S. Census Bureau to collect detailed demographic information. For this analysis, aggregated five-year data from the 2017 and 2019 surveys was used to increase reliability.

NC DEQ imported, analyzed and aggregated the ACS data to determine a “percentage of underserved population” measure for each county. The percentage of underserved populations calculated for EJ project and vehicle scores was also used to determine inclusion in the Historically Under-Resourced County Outreach Program.

Percentages for the block group level, county level, and state level were calculated for the following two variables, “Race and Ethnicity” and “Poverty.” After adding all county and state data to the block group data, we calculated the four variables utilized to identify potentially underserved block groups which included:

- Race and Ethnicity Compared to the State: $((\text{Block group percent estimate for Non-white or Hispanic/Latino} - \text{State percent estimate for non-white or Hispanic/Latino}) / \text{State percent estimate for non-white or Hispanic/Latino}) * 100$
- Race and Ethnicity Compared to the County: $((\text{Block group percent estimate for Non-white or Hispanic/Latino} - \text{County percent estimate for non-white or Hispanic/Latino}) / \text{County percent estimate for non-white or Hispanic/Latino}) * 100$
- Poverty Compared to the State: $((\text{Block group percent estimate for poverty} - \text{State percent estimate for poverty}) / \text{State percent estimate for poverty}) * 100$
- Poverty Compared to the County: $((\text{Block group percent estimate for poverty} - \text{County percent estimate for poverty}) / \text{County percent estimate for poverty}) * 100$

The current criteria that are used to determine potentially underserved populations is related to both poverty level within a block group and to race and ethnicity within a block group and is compared on both the county and the state level. To classify a block group as potentially underserved, it must meet both of the following criteria:

- The block group must have an estimated population in poverty that is at least a five percent increase from the state or county percent AND the block group must have an estimated population in poverty of at least 20%.
- The block group must have an estimated non-white or Hispanic population that is at least a ten percent increase from the state or county percent OR the block group must have an estimated population of non-white or Hispanic residents that is greater than 50% of the total population of that block group.

After determining the percent underserved measure for each county, these percentages were ranked from highest to lowest and using natural breaks, 15 bins were created, and points were assigned accordingly. Statistically, utilizing natural breaks divides continuous values into clusters resulting in values that are grouped together in classes that are more like each other than to the values in any other class.

Attachment B

Project Budget

Period of Performance: FY 2022 – FY 2024			
Budget Category	Total Approved Budget	Share of Total Budget to be Funded by the Trust	Cost-Share paid by fleet owners
1. Equipment Expenditure	\$6,722,048.00	\$4,141,386.00	\$2,580,662.00
2. Contractor Support <i>(provide list of Approved Contractors as Attachment with approved funding ceilings)</i>	\$0	\$0	\$0
3. Subrecipient Support <i>(Provide List of Approved Subrecipients or Grant Awardees as Attachment with approved funding ceilings)</i>	\$0	\$0	\$0
4. Administrative ¹	\$275,000.00	\$275,000.00	\$0
Project Totals	\$6,997,048.00	\$4,416,386.00	\$2,580,662.00
Percentage	100%	63.1%	36.9%

¹ Subject to Appendix D-2 15% administrative cap.

TIMELINE AND MILESTONES:

Task	Date Completed
Request for Proposals announced – Phase 2 Clean Heavy-Duty Diesel Equipment and Vehicle Program	May 16, 2022
Request for Proposal Closing – Application Deadline	August 15, 2022
NCDEQ selects grant recipients	October 2022
Public notification of awarded projects	October 2022
NCDEQ submits D-4 and other required forms to Trustee	September 7, 2022
Trustee acknowledges receipt of funding request	Receipt from Trustee
Begin processing contracts for awardees	CY 2022, Q4
Trustee acknowledges receipt of project certification and funding direction	Transfer Date
Contracts with awardees signed	CY 2022, Q4
Subgrantees begin project work	CY 2022, Q4
NCDEQ submits reports to the Trustee on the status of and expenditures with Mitigation Actions completed and underway.	January 30 and July 30 thereafter
Grantee provides proof of destruction, invoices and other documents required for reimbursement.	CY 2023, Q2 – CY 2024, Q4 (estimated)
NCDEQ reviews, requests corrections, if necessary, certifies project completion, and provides reimbursement.	CY 2023, Q2 – CY 2024, Q4 (estimated)
NCDEQ returns any unused funds to Trustee	CY 2025, Q1 (estimated)

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

The NC Department of Environmental Quality (NC DEQ) will provide detailed reporting on this funding request in two ways:

1. Timely updates to the NC DEQ's Volkswagen Diesel Settlement website,
2. Semi-annual reporting to the Trustee as required by subparagraph 5.3 of the Environmental Mitigation Trust for State Beneficiaries.

NC DEQ Website

NC DEQ maintains a website describing the NC DEQ's activities associated with the Volkswagen Diesel Emissions Environmental Mitigation Trust for State Beneficiaries. The website may be found here: deq.nc.gov/VWsettlement. Information associated with NC DEQ's VW programs, applications, and application guides, as well as a description of the VW Beneficiary Mitigation Plan, community outreach activities and copies of award decisions will be posted here. This website will also be used to track the status, progress, and results for projects under this funding category.

All application materials, reimbursement requests and other required documentation submitted by applicants will be available to the public through the NC DEQ Volkswagen webpage or upon request. Funding recipients' executed contracts for the NC DEQ's Diesel Bus and Vehicle Program are archived in the NC DEQ Grant Management System.

Semi-Annual Reports to the Trustee

As required by subparagraph 5.3 of the Environmental Mitigation Trust Agreement for State Beneficiaries, NC DEQ will submit a report to the Trustee within 6 months of the first disbursement and thereafter no later than January 30 and July 30 for the preceding 6-month periods. These reports will describe the progress implementing this and any other Eligible Mitigation Action ongoing during the reporting period. These reports will include a summary of all costs expended and a complete description of the status (including the actual or projected termination date), development, implementation, and any modification of the Eligible Mitigation Action. These semi-annual reports to the Trustee will be posted on the NC DEQ website for public access.

Attachment D

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

Vehicle Type	Fuel Type	Estimated Number of Vehicles	Estimated Vehicle Costs	Estimated Infrastructure Costs	Estimated VW Infrastructure Funds	Estimated Total Estimated Costs	Estimated VW Funds per Vehicle	Estimated Matching Funds per Vehicle	Estimated Total Matching Funds	Estimated Total VW Funds	Estimated Total Project Costs
Freight Switcher	Electric	1	\$2,743,424.00	\$657,600.00	\$75,000.00	\$3,401,024.00	\$2,025,693.00	\$717,731.00	\$1,300,331.00	\$2,100,693.00	\$3,401,024.00
Freight Switcher	Electric	1	\$2,663,424.00	\$657,600.00	\$75,000.00	\$3,321,024.00	\$1,965,693.00	\$697,731.00	\$1,280,331.00	\$2,040,693.00	\$3,321,024.00
		2	\$5,406,848.00	\$1,315,200.00	\$150,000.00	\$6,722,048.00	\$3,991,386.00	\$1,415,462.00	\$2,580,662.00	\$4,141,386.00	\$6,722,048.00

Number of Vehicles	Vehicle Costs	Total Infrastructure Costs	VW Infrastructure Costs	Estimated Lifetime NOx Emissions (tons per vehicle)	Lifetime PM2.5 Emissions (short tons)	Lifetime HC Emissions (short tons)	Lifetime CO Emissions (short tons)	Lifetime CO2 Emissions (short tons)
1	\$2,743,424.00	\$657,600.00	\$75,000.00	52.0	1.11	3.02	5.47	3,375.0
1	\$2,663,424.00	\$657,600.00	\$75,000.00	41.6	0.88	2.41	4.37	3,375.0
2	\$5,406,848.00	\$1,315,200.00	\$150,000.00	93.6	1.99	5.43	9.84	6,750.0