

APPENDIX D-4
Beneficiary Eligible Mitigation Action Certification

State of Nebraska
Funding Request #10

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 SUMMARY Supplement (page 6).

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 State of Nebraska, 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: April 5, 2022

Kara L. Valentine
Deputy Director

[NAME]

[TITLE]

Nebraska Department of Environment and Energy

[LEAD AGENCY]

for

State of Nebraska

[BENEFICIARY]



Signature

SUMMARY SUPPLEMENT

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

Nebraska’s Beneficiary Mitigation Plan posted in January 2018 proposed to use 25% of Nebraska’s initial allocation, or approximately \$3 million, to supplement federal funding of the Nebraska Clean Diesel Program under the U.S. Environmental Protection Agency (EPA) DERA State Grant Program, consistent with Eligible Mitigation Action 10 (DERA Option) of the State Trust Agreement. This request will provide funding for the state’s 2021 Clean Diesel Rebate Program under DERA.

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

The Nebraska Dept. of Environment and Energy (NDEE) elected to fund DERA rebates to individual Clean Diesel Rebate recipients using either federal funds or voluntary state matching funds obtained through the Volkswagen Diesel Emission Environmental Mitigation Trust for States (VW State Trust). The subprojects in this funding request are those DERA rebates being funded entirely by the voluntary state matching funds from the VW State Trust.

Three types of DERA rebate projects will be funded through this request:

1) Replacement of Medium and Heavy-Duty Diesel Refuse Trucks

Under DERA Eligible Diesel Emission Reduction Solution VIII.C.1 (Vehicle and Equipment Replacements), NDEE is providing rebates for replacement of eligible diesel refuse trucks by a:

- a) New diesel-fueled truck certified to meet EPA emissions standards (25% reimbursement up to a maximum set by NDEE of \$70,000).
- b) New Compressed Natural Gas (CNG)-fueled truck certified to meet California Air Resources Board Optional Low-NOx Standards (35% reimbursement up to a maximum set by NDEE of \$120,000).

Five diesel trucks will be replaced under this funding request. The expected replacements are one CNG-fueled truck and four diesel trucks. Recipients are listed in Attachment B.

2) Replacement of Diesel School Buses

Under DERA Eligible Diesel Emission Reduction Solution VIII.C.1 (Vehicle and Equipment Replacements), NDEE is providing rebates for replacement of eligible diesel school buses by a:

- a) New diesel or gasoline bus certified to meet EPA emissions standards (25% reimbursement up to a maximum set by NDEE of \$21,000).
- b) New propane-fueled truck certified to meet California Air Resources Board Optional Low-NOx Standards (35% reimbursement up to a maximum set by NDEE of \$33,000).

Thirteen diesel buses will be replaced under this funding request. The expected replacements are four propane buses, eight diesel buses, and one gasoline bus. Recipients are listed in Attachment B.

3) Non-Road Agricultural Diesel Engine Replacement with All-Electric Equipment

Under DERA Eligible Diesel Emission Reduction Solution VIII.C.2 (Engine Replacement), NDEE is providing rebates for the replacement of diesel engines powering surface agricultural irrigation pumps. The engine must be replaced by an electric motor.

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Following the DERA Program Guide, NDEE is providing reimbursement of 60% of the cost of equipment and labor for these replacement projects, including the cost of extending electrical service to the well site. After examining previous project costs, NDEE set a maximum rebate amount of \$20,000.

NDEE chose to fund a larger number of school bus and irrigation engine projects than anticipated in the 2021 DERA Workplan by providing a larger Voluntary State Match using VW State Trust funds. A total of four diesel irrigation engine replacement projects are expected to be funded under this request. Recipients are listed in Attachment B.

During residential trash pickup and other local operations, diesel trucks operate at low speed with frequent stops with the engine idling. Diesel engine emission controls are not very effective under these conditions, so the trucks expose nearby residents to the harmful effects of these emissions. Children who ride in older school buses are exposed to diesel exhaust and are more vulnerable than adults to the harmful effects of this exhaust. Replacement of older diesel trucks and school buses with new, cleaner vehicles will reduce emissions and reduce adverse health effects on school children and nearby residents due to exposure to these pollutants.

Replacement of four diesel irrigation engines with all-electric equipment will completely remove the diesel pollutants currently being emitted by these engines, which contribute to generation of harmful ozone during the warm summer months.

Estimate of Anticipated NO_x Reductions (5.2.3):

Nebraska DEE estimated diesel emission reductions using the EPA on-line Diesel Emissions Quantifier. We calculated reductions for 1) each diesel truck and school bus applicant using the provided engine model year, annual mileage, fuel use, replacement fuel, and estimated remaining lifetime of the current vehicle; and 2) each diesel irrigation engine applicant using the provided annual operating hours, fuel use, and estimated remaining lifetime of the diesel engine.

We estimate that the irrigation engine and diesel vehicle replacement projects funded by this request will result in lifetime reductions in NO_x emissions of 27.2 tons and reduction in particulate emissions of 1.36 tons.

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

NDEE maintains a series of webpages describing the Nebraska Clean Diesel Program, with the main page at <http://deq.ne.gov/NDEQProg.nsf/OnWeb/NCDGP>. Separate pages are provided for applicants and rebate recipients for each type of project under the program.

All application materials, reimbursement requests, and required documentation submitted by applicants and rebate recipients for the Clean Diesel Program are archived in Nebraska's Enterprise Content Management (ECM) system and are available to the public through a Public Records Search web page accessed through the NDEE website. Also see Attachment C.

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

Diesel truck and school bus rebate recipients are subject to a minimum 75% cost-share for the purchase of a new diesel vehicle or 65% cost-share for purchase of a new vehicle meeting stricter emissions standards. Recipients of diesel irrigation engine rebates are subject to a minimum 40% cost-share for the purchase and installation of new all-electric equipment. Cost-share percentages for individual projects may exceed these minimum percentages if the dollar amount corresponding to the maximum reimbursement percentage exceeds the rebate limit imposed by NDEE based on typical project costs. See Attachment B for listings of recipients, expected rebates, and expected cost-share amounts.

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

Residents of urban areas in eastern Nebraska have historically borne a disproportionate share of the adverse effects of NO_x emissions. The replacement of diesel refuse trucks that operate in these metropolitan areas will directly reduce NO_x emissions and their impact on the health of residents in these communities.

Diesel irrigation engines operate during warmer months of the year when NO_x emissions act as a chemical feedstock for the formation of low-level ozone. This transformation occurs over a period of hours as pollutants are transported in the atmosphere. The replacement of rural diesel irrigation engines that are upwind of the urban areas of eastern Nebraska will eliminate their NO_x emissions and should reduce the production of ozone that would otherwise impact the downwind urban areas.

ATTACHMENT B

PROJECT MANAGEMENT PLAN INCLUDING DETAILED BUDGET AND IMPLEMENTATION AND EXPENDITURES TIMELINE (5.2.4)

**PROJECT SCHEDULE AND TIMELINE,
2021 NEBRASKA CLEAN DIESEL REBATE PROGRAM**

| Project Milestone | Date |
|--|---|
| NDEE posts program information and application materials on agency website; e-mail notification to Natural Resource Districts, electric utilities, waste management associations, and landfills. | 1 October 2021 |
| Deadline for submission of applications | 13 January 2022 |
| Selection and notification of rebate recipients | 14-25 February 2022 |
| Finalization of agreements with rebate recipients | February 2022 |
| Submission of Project Certification and Funding Direction | March 2022 |
| Trustee Allocates Advanced Funding to NDEE | By 20 June 2022 |
| NDEE reviews reimbursement requests from recipients and provides payment for projects as completed | 2022 Quarter 3-4 2023 Quarter 1-3 |
| NDEE reports on project progress | July 2022, January 2023, July 2023, January 2024 |
| NDEE reports project completion | January 2024 |

EXPECTED COSTS OF INDIVIDUAL PROJECTS FUNDED THROUGH THIS REQUEST

Three types of DERA rebate projects will be funded through this request:

1) Replacement of Medium and Heavy-Duty Diesel Refuse Trucks

Applicants were required to submit price quotes for specific new replacement trucks with their applications. Recipients of the diesel truck replacement rebates that will be funded by this request are:

| Rebate Recipient | Location | Rebate Amount | Recipient Cost-Share | Project Cost |
|---|--------------------------|----------------------|-----------------------------|---------------------|
| <u>Abe’s Trash Service</u> 2 diesel-fueled replacement trucks | Washington County | \$ 138,600 | \$ 483,936 | \$ 622,536 |
| <u>Gretna Sanitation</u> 1 CNG-fueled replacement truck | Sarpy & Douglas Counties | \$ 120,000 | \$ 303,848 | \$ 423,848 |
| <u>Waste Connections of Nebraska dba Papillion Sanitation</u> 2 diesel-fueled replacement trucks | Sarpy County | \$ 140,000 | \$ 602,571 | \$ 742,571 |
| TOTAL | | \$ 398,600 | \$ 1,390,355 | \$1,788,955 |

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2) Replacements of Diesel School Buses

Applications for this program were required to include price quotes for a specific replacement bus. The expected rebate recipients are listed below.

| Rebate Recipient | Location | Rebate Amount | Recipient Cost-Share | Total Project Cost |
|--------------------------------|-----------------|----------------------|-----------------------------|---------------------------|
| Arlington Public School | Arlington | \$ 21,000 | \$ 80,415 | \$ 101,415 |
| Bloomfield Community Schools | Bloomfield | \$ 21,000 | \$ 70,300 | \$ 91,300 |
| Broken Bow Public Schools | Broken Bow | \$ 21,000 | \$ 78,500 | \$ 99,500 |
| Doc Holiday Express | Grand Island | \$ 33,000 | \$ 75,271 | \$ 108,271 |
| Elmwood-Murdock Public Schools | Murdock | \$ 21,000 | \$ 75,850 | \$ 96,850 |
| Falls City Schools District 56 | Falls City | \$ 21,000 | \$ 91,808 | \$ 112,808 |
| Maywood Public Schools | Maywood | \$ 33,000 | \$ 69,260 | \$ 102,260 |
| Palmyra Schools District OR-1 | Palmyra | \$ 21,000 | \$ 77,449 | \$ 98,449 |
| Pleasanton Public School | Pleasanton | \$ 33,000 | \$ 75,216 | \$ 108,216 |
| South Central USD #5 | Fairfield | \$ 16,569 | \$ 49,706 | \$ 66,275 |
| Wakefield Community Schools | Wakefield | \$ 21,000 | \$ 69,300 | \$ 90,300 |
| Wausa Public Schools | Wausa | \$ 33,000 | \$ 65,159 | \$ 98,159 |
| Waverly Public Schools #145 | Waverly | \$ 21,000 | \$ 92,995 | \$ 113,995 |
| TOTAL | | \$ 316,569 | \$ 971,228 | \$ 1,287,798 |

3) Non-Road Agricultural Diesel Engine Replacements with All-Electric Equipment

Applications for this program were required to include price quotes for the new equipment, electrical contracting work, and utility service line extension. The expected rebate recipients are listed below.

| Rebate Recipient | Nebraska County | Rebate Amount | Recipient Cost-Share | Total Project Cost |
|-------------------------|------------------------|----------------------|-----------------------------|---------------------------|
| Krieger, Lowell | Holt | \$ 19,997 | \$ 13,332 | \$ 33,329 |
| Oeltjen, Charles | Greeley | \$ 19,238 | \$ 12,825 | \$ 32,063 |
| Sehi Farms Inc. | Antelope | \$ 18,969 | \$ 12,646 | \$ 31,615 |
| Williby, Neil | Antelope | \$ 14,840 | \$ 9,893 | \$ 24,733 |
| TOTAL | | \$ 73,044 | \$ 48,696 | \$ 121,741 |

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PROJECT BUDGET

| Period of Performance: October 2021 – September 2023 | | | |
|---|--|--|----------------------------|
| Budget Category | Share of Total Budget to be Funded by the Trust | Cost-Share to be Paid by Project Recipients | Total Budget Amount |
| <u>Equipment:</u> | | | |
| Diesel Truck Rebates | \$ 398,600 | \$ 1,390,355 | \$ 1,788,955 |
| School Bus Rebates | \$ 316,569 | \$ 971,228 | \$ 1,287,797 |
| Irrigation Engine Rebates | \$ <u>73,045</u> | \$ <u>48,696</u> | \$ <u>121,741</u> |
| EQUIPMENT TOTAL | \$ 788,214 | \$ 2,410,279 | \$ 3,198,493 |
| Contractor Support | \$ 0 | \$ 0 | \$ 0 |
| Subrecipient Support | \$ 0 | \$ 0 | \$ 0 |
| <u>Administrative Costs (3%)</u> | | | |
| Program planning, development, outreach, and administration | \$ 23,646 | \$ 0 | \$ 23,646 |
| Project Totals | \$ 811,860 | \$ 2,410,279 | \$ 3,222,139 |
| Percentage | 25.2% | 74.8% | 100% |

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FUNDING REQUESTS: PREVIOUS, CURRENT, AND PLANNED

| Funding Request | Received from Trust | Trust Funds Expended | Recipient Cost-Share | Total Project Funding | Status | Unspent Amount Returned to Trust | Amount Remaining |
|--------------------------------------|----------------------------|-----------------------------|-----------------------------|------------------------------|---------------|---|-------------------------|
| <u>Previous Requests</u> | | | | | | | |
| 1. 2017 DERA Program Projects | \$ 287,243 | \$ 287,243 | \$ 713,968 | \$ 1,001,211 | Complete | \$ 0 | \$ 0 |
| 2. 2018 School Bus Rebates | \$ 1,891,527 | \$ 1,746,840 | \$ 2,526,044 | \$ 4,417,571 | Complete | \$ 144,687 | \$ 0 |
| 3. 2018 Transit Bus Rebates | \$ 1,255,206 | \$ 1,241,584 | \$ 2,235,165 | \$ 3,490,371 | Complete | \$ 13,780 | \$ 0 |
| 4. 2018 DERA Program | \$ 775,213 | \$ 720,227 | \$ 932,659 | \$ 1,707,872 | Complete | \$ 55,036 | \$ 0 |
| 5. 2019 School Bus Rebates | \$ 2,758,981 | \$ 2,652,775 | \$ 3,392,200 | \$ 6,151,181 | Complete | \$ 106,206 | \$ 0 |
| 6. Electric Vehicle Charging Rebates | \$ 1,909,134 | \$ 677,504 | \$ 742,010 | \$ 2,651,144 | Active | | \$ 1,231,630 |
| 7. 2019 DERA Program Projects | \$ 525,784 | \$ 263,189 | \$ 722,484 | \$ 1,248,268 | Active | | \$ 262,595 |
| 8. 2020 School Bus Rebates | \$ 2,033,476 | \$ 1,877,319 | \$ 2,664,495 | \$ 4,697,971 | Complete | \$ 146,157 | \$ 0 |
| 9. 2020 DERA Program Projects | \$ 843,735 | \$ 156,219 | \$ 1,739,329 | \$ 2,583,064 | Active | | \$ 687,516 |
| <u>Current Request:</u> | | | | | | | |
| 10. 2021 DERA Program Projects | \$ 811,860 | | \$ 2,410,279 | \$ 3,222,139 | | | |
| TOTALS | \$ 13,092,159 | \$ 9,632,899 | \$ 18,078,633 | \$ 31,170,792 | | \$ 465,866 | \$ 2,181,741 |

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PROJECTED ANNUAL TRUST ALLOCATIONS

| | 2021 | 2022 | 2023 |
|---|---------------|---------------|---------------|
| 1. Anticipated Annual Project Funding Request to be paid through the Trust | \$ 843,735 | \$ 811,860 | \$ 129,600 |
| 2. Anticipated Annual Cost Share | \$ 1,739,329 | \$ 2,410,279 | \$ 300,000 |
| 3. Anticipated Total Project Funding by Year (line 1 plus line 2) | \$ 2,583,064 | \$ 3,222,139 | \$ 429,600 |
| 4. Cumulative Trustee Payments Made in Previous Years Against Cumulative Approved Beneficiary Allocation | \$ 11,436,563 | \$ 12,280,298 | \$ 13,092,158 |
| 5. Current Beneficiary Project Funding to be paid through the Trust (line 1) | \$ 843,735 | \$ 811,860 | \$ 129,600 |
| 6. Total Funding Allocated to Beneficiary, inclusive of Current Action by Year (line 4 plus line 5) | \$ 12,280,298 | \$ 13,092,158 | \$ 13,221,758 |
| 7. Beneficiary Share of Principal Remaining in Trust at Start of Year | \$ 994,697 | \$ 470,670 | \$ 43,101 |
| 8. Unspent Beneficiary Funds Returned to the Trust | \$ 319,708 | \$ 146,157 | \$ 86,499 |
| 9. Beneficiary Net Income on Trust Assets | | \$ 238,135 | |
| 10. Net Beneficiary Funds Remaining in Trust, net of cumulative Beneficiary Funding Actions (sum of lines 7 through 9 minus line 5) | \$ 470,670 | \$ 43,101 | \$ 0 |

ATTACHMENT C

**DETAILED PLAN FOR REPORTING ON
ELIGIBLE MITIGATION ACTION IMPLEMENTATION (5.2.11)**

The Nebraska Department of Environment and Energy (NDEE) will provide detailed reporting on this funding request under Eligible Mitigation Action 10 (DERA Option) in two ways: 1) timely updates to NDEE’s Volkswagen Environmental Mitigation Trust – Nebraska Diesel Emission Mitigation Program web pages; and 2) semi-annual reports to the Trustee as required by subparagraph 5.3 of the Environmental Mitigation Trust Agreement for State Beneficiaries.

NDEE Website

NDEE maintains a series of webpages describing the Nebraska Diesel Emission Mitigation Program under the Volkswagen Diesel Emissions Environmental Mitigation Trust for State Beneficiaries. The main Volkswagen Trust webpage, which outlines the mitigation actions eligible for funding and their status, can be found at <http://dee.ne.gov/NDEQProg.nsf/OnWeb/AirVW>. Copies of funding request certifications to the Trustee will be available through this web page. Separate web pages for individual project categories are developed and posted as funding programs open; these pages track the status, progress, and results for projects under these funding categories.

All application materials, reimbursement requests, and required documentation submitted by applicants and rebate recipients for Nebraska’s Diesel Emission Mitigation program are archived electronically in Nebraska’s Enterprise Content Management (ECM) system and are available to the public through a Public Records Search web page accessed through the NDEE website.

Semi-Annual Reports to the Trustee

As required by subparagraph 5.3 of the Environmental Mitigation Trust Agreement for State Beneficiaries, NDEE will submit a report to the Trustee no later than January 30 and July 30 each year 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 available for public access through links on the main Volkswagen Trust page on the NDEE website.

ATTACHMENT D

**DETAILED COST ESTIMATES FROM SELECTED VENDORS
FOR EACH PROPOSED EXPENDITURE EXCEEDING \$25,000 (5.2.6)**

DIESEL SCHOOL BUS REPLACEMENTS

Each applicant for the 2021 Nebraska Clean Diesel School Rebate Program was required to seek at least one price quote for a single replacement bus and submit it with their application. The table below lists the quotes for the bus replacement projects covered by this funding request. Environmental Mitigation Funds will provide recipients 25% or \$21,000, whichever is less, toward the purchase of a new diesel or gasoline bus, and 35% or \$33,000, whichever is less, toward the purchase of a new propane-fueled bus meeting California Air Resources Board Optional Low-NOx emission standards.

| Recipient | Fuel | Vendor | Vehicle Cost | Rebate | Cost-Share |
|--------------------------------|-------------|----------------------------|---------------------|---------------|-------------------|
| Arlington Public School | Diesel | Truck Center Companies | \$101,415 | \$21,000 | \$80,415 |
| Bloomfield Community Schools | Diesel | Truck Center Companies | \$91,300 | \$21,000 | \$70,300 |
| Broken Bow Public Schools | Diesel | Nebraska Central Equipment | \$99,500 | \$21,000 | \$78,500 |
| Doc Holiday Express | Propane | Nebraska Central Equipment | \$108,271 | \$33,000 | \$75,271 |
| Elmwood-Murdock Public Schools | Diesel | Truck Center Companies | \$96,850 | \$21,000 | \$75,850 |
| Falls City Schools District 56 | Diesel | Nebraska Central Equipment | \$112,808 | \$21,000 | \$91,808 |
| Maywood Public Schools | Propane | Nebraska Central Equipment | \$102,260 | \$33,000 | \$69,260 |
| Palmyra Schools District OR-1 | Diesel | Nebraska Central Equipment | \$98,449 | \$21,000 | \$77,449 |
| Pleasanton Public School | Propane | Nebraska Central Equipment | \$108,216 | \$33,000 | \$75,216 |
| South Central USD #5 | Gasoline | Truck Center Companies | \$66,275 | \$16,569 | \$49,705 |
| Wakefield Community Schools | Diesel | Cornhusker International | \$90,300 | \$21,000 | \$69,300 |
| Wausa Public Schools | Propane | Nebraska Central Equipment | \$98,159 | \$33,000 | \$65,159 |
| Waverly Public Schools #145 | Diesel | Truck Center Companies | \$113,995 | \$21,000 | \$92,995 |

DIESEL TRUCK REPLACEMENTS

Each applicant for the 2021 Nebraska Clean Diesel Refuse Truck Rebate Program was required to seek at least one price quote for each replacement truck and submit it with their application. The table below lists the quotes for the diesel truck replacement projects covered by this funding request. These quotes include the cost of the truck cab and chassis along with the cost of body and equipment to be mounted on the chassis, such as a trash packer-loader for a refuse truck or hook lift for a roll-off truck.

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| Recipient | Fuel | Vendors & Unit Costs | # Units | Cost | Rebate | Cost-Share |
|--|--------|--|---------|-----------|-----------|------------|
| Abe's Trash Service | Diesel | Front-loading Refuse Truck <u>McNeilus Truck, Dodge Center, MN:</u> Mack TerraPro (cab/chassis) Model 78 Meridian Front Loader | 1 | \$348,136 | \$70,000 | \$278,136 |
| | Diesel | Roll-Off Refuse Truck <u>MHC Kenworth, Omaha, NE:</u> Kenworth T800 (cab/chassis): \$205,900 <u>Olympic Sales, Fargo, ND:</u> Ampliroll Hoof Lift Model 160: \$68,500 | 1 | \$274,400 | \$68,600 | \$205,800 |
| Gretna Sanitation | CNG | Refuse Truck <u>RDO Truck Center, Omaha, NE:</u> Mack LR 64R G (cab/chassis): \$194,905 <u>McNeilus Truck, Dodge Center, MN:</u> Trash packer/loader: \$228,943 | 1 | \$423,848 | \$120,000 | \$303,848 |
| Waste Connections of Nebraska dba Papillion Sanitation | Diesel | Side-Loading Refuse Truck <u>Rush Truck Center:</u> Peterbilt 520 RH (cab/chassis): \$220,559 McNeilus trash packer-loader: \$150,091 | 1 | \$370,650 | \$70,000 | \$300,650 |
| | Diesel | Front-loading Refuse Truck <u>Rush Truck Center:</u> Peterbilt 520 RH (cab/chassis): \$220,252 McNeilus trash packer-loader: \$151,669 | 1 | \$371,921 | \$70,000 | \$301,921 |

DIESEL IRRIGATION ENGINE REPLACEMENTS WITH ALL-ELECTRIC EQUIPMENT

Each applicant for the 2021 Nebraska Clean Diesel Irrigation Engine Rebate Program was required to provide price quotes for a new electric motor (if needed), other required electrical and well equipment (conduit, panels, etc.) and labor, and for the cost of extending electric service to the irrigation well site. Quoted cost ranges from the six recipients to be funded through this request are shown below. Costs are quite variable depending on the equipment to be installed and the length of utility service line needed to connect the well site to the electric grid.

| Recipient | Equipment & Installation | Service Line Extension | Total Project Cost | Rebate | Cost-Share |
|------------------|--------------------------|------------------------|--------------------|----------|------------|
| Krieger, Lowell | \$21,347 | \$11,955 | \$33,329 | \$19,997 | \$13,332 |
| Oeltjen, Charles | \$27,523 | \$4,541 | \$32,064 | \$19,238 | \$12,825 |
| Sehi Farms Inc. | \$24,959 | \$6,657 | \$31,615 | \$18,969 | \$12,646 |
| Williby, Neil | \$24,733 | \$0 | \$24,733 | \$14,840 | \$9,893 |

2021 Diesel Emissions Reduction Act (DERA) State Grants

Work Plan and Budget Narrative

NEBRASKA DEPARTMENT OF ENVIRONMENT AND ENERGY

REVISED 1/06/2022



SUMMARY PAGE

Project Title: 2021 Nebraska Clean Diesel Rebate Program

Project Manager and Contact Information

Organization Name: Nebraska Department of Environment and Energy

Project Manager: Randy Smith

**Mailing Address: Nebraska Department of Environment and Energy
P.O. Box 98922
Lincoln, NE 68509-8922**

Phone: 402-471-4272

Fax: 402-471-2909

Email: randy.smith@nebraska.gov

Project Budget Overview:

| | 2021 |
|---------------------------------|------------------|
| EPA Base Allocation | \$340,236 |
| EPA Match Bonus (if applicable) | \$170,118 |
| Voluntary Matching Funds | \$353,639 |
| TOTAL Funds | \$863,993 |

Project Period

October 1, 2021 – September 30, 2023

Summary Statement

The Nebraska Department of Environment and Energy (NDEE) proposes to award rebates in three subprograms: 1) replacement of diesel refuse trucks, 2) replacement of diesel school buses, and 3) electric replacements of diesel engines powering agricultural irrigation pumps. Utilizing both EPA and State Voluntary Matching Funds, NDEE anticipates awarding five rebates for replacement of diesel refuse trucks, ten rebates for school bus replacements, and 17 rebates for electric replacements of diesel irrigation engines.

SCOPE OF WORK

STATE/TERRITORY GOALS AND PRIORITIES:

Although all areas of Nebraska are currently in attainment with the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants, ozone levels approaching the ozone NAAQS (0.70 ppm) have been experienced at times in the Omaha metropolitan area and at Santee in northeastern Nebraska. Ozone levels at rural monitoring sites in and around Nebraska also have ranged from 75% to 89% of the NAAQS in recent years, showing that ozone levels are elevated throughout the region.

According to the 2017 National Emissions Inventory, diesel vehicles and equipment in Nebraska are annually responsible for 72,285 tons of nitrogen oxide (NO_x) emissions, 3,400 tons of coarse particulates (PM₁₀), and 3,106 tons of fine particulates (PM_{2.5}), primarily from heavy-duty diesel highway vehicles, locomotives, and non-road diesel equipment. Diesel sources are responsible for 51.5% of the non-biogenic NO_x emissions in the state, which can contribute to the production of ground-level ozone. Reducing diesel emissions is therefore a priority for the Nebraska Department of Environment and Energy (NDEE).

Statistics from the Nebraska Department of Motor Vehicles (DMV) list over 555,000 commercial and farm trucks registered in the state in 2018 (the most recent year for which data are available). Although these statistics do not include the fuel type, data from the U.S. Energy Information Administration show that about 40% of the transportation sector energy consumption in the state in 2018 was from diesel fuel.

During the 2018-2019 school year over 5,700 school buses operated in Nebraska, according to School Bus Fleet Magazine. Nearly 47,000 students were transported in buses that, in total, traveled over 23,700,000 miles. Children who ride in older school buses are exposed to diesel exhaust and are more vulnerable than adults to the harmful effects of this exhaust. Over the past three years NDEE has utilized funds from the *Volkswagen Diesel Emissions Environmental Mitigation Trust for States* (VW State Trust) to facilitate replacement of 160 older diesel school buses with new diesel or low-NO_x propane buses. While most schools chose diesel buses as replacements, twenty replacements were propane-fueled buses meeting California low-NO_x emissions standards. However, all available funds for that program have now been committed.

As of October 2016, Nebraska had over 99,000 active agricultural irrigation wells, many of which have pumps powered by diesel engines. Exhaust from this large number of diesel engines is a significant contributor to air pollution in the state. Although these engines are in rural areas, they operate during the warmer months of the year when formation of ozone from diesel exhaust is at a maximum, and ozone can be transported readily to nearby urban areas.

The public transit agencies in the two largest Nebraska cities (Omaha and Lincoln) have reduced diesel emissions over the last decade by replacing diesel buses with lower-emission vehicles. These agencies primarily rely on U.S. Department of Transportation grant funding for vehicle replacements. As of 2019, Omaha Metro Transit had introduced 14 full-size compressed natural

gas (CNG) buses and 9 CNG paratransit vehicles to its fleet. In the fall of 2020 Omaha Metro launched Omaha Rapid Bus Transit (ORBT) operations using ten CNG-fueled, articulated buses that replaced older diesel buses. Purchase of two ORBT buses was partially supported by NDEE utilizing VW State Trust funds.

StarTran, the transit bus agency in Lincoln, has introduced 26 compressed natural gas (CNG) buses and 11 CNG paratransit vehicles to its fleet, replacing older diesel and gasoline vehicles. CNG vehicles now make up over one-third of the StarTran fleet. StarTran has also purchased 10 battery-electric transit buses, the first of which was delivered in February 2020. The initial order of four electric buses was partially supported by NDEE using funds from the VW State Trust.

Despite these efforts, many older diesel trucks, school buses, and non-road equipment and engines continue to operate in Nebraska. New trucks and school buses with engines that meet EPA emissions standards drastically reduce these harmful emissions, and diesel irrigation engines can be replaced with electric motors, completely eliminating their diesel emissions. Replacement of diesel trucks, school buses, and engines with new cleaner diesel or alternative replacements is thus a priority of the Nebraska Clean Diesel Program.

VEHICLES AND TECHNOLOGIES:

NDEE plans to award rebates in three subprograms:

1. Replacement of medium and heavy-duty diesel refuse trucks.
2. Replacement of diesel school buses.
3. Replacement of diesel irrigation engines by all-electric equipment.

Replacement of Heavy-Duty Diesel Refuse Trucks:

NDEE will offer rebates to assist eligible applicants with partial reimbursement for the replacement of heavy-duty diesel refuse trucks. Eligible applicants will be municipalities and private contractors operating diesel refuse trucks in Nebraska communities. An applicant will be allowed to apply to replace up to two trucks.

Vehicles eligible for replacement will be trucks in Gross Vehicle Weight Rating Classes 7 and 8 with diesel engines with model year 2009 or older. The applicant will be required to certify that each existing truck is operational, in current use, and has at least three years of remaining life at the time of the replacement. The applicant also will be required to certify that each vehicle has logged at least 7,000 miles in each of the two years prior to submission of the application. Documentation of ownership, operation, and mileage during that two-year period will be required with the application.

The eligible replacement vehicle must not be in a higher Gross Vehicle Weight Rating (GVWR) Class than the replaced vehicle and must resemble it in form and function. The replacement vehicle must continue to perform the same function as the replaced vehicle.

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The replacement vehicle will be required to be powered by:

- A diesel or alternative-fuel engine, model year 2019 or newer, certified to meet EPA emissions standards (25% rebate, with maximum rebate of \$70,000); or
- An engine fueled by compressed natural gas (CNG), model year 2019 or newer, certified to meet CARB Optional Low-NOx Emission Standards (35% rebate, with maximum rebate of \$120,000).

Priority will be given to vehicles operating in Douglas County (EPA Priority County that includes the City of Omaha) or in other urban areas, and to replacement vehicles with Low-NOx CNG engines. NDEE anticipates funding 2 CNG and 2 diesel replacement refuse trucks. However, the number of CNG replacements may be lower due to the limited availability of CNG fueling facilities (limited to Lincoln, North Platte, Columbus, and the Omaha metropolitan area). All entities that receive a rebate will be required to follow the scrappage requirements outlined in the FY2021 State Clean Diesel Grant Program Information Guide.

Replacement of Diesel School Buses:

NDEE will offer rebates to assist eligible applicants with partial reimbursement for the replacement of diesel school buses. Eligible applicants will be Nebraska public school districts, private schools, and private entities that operate school buses under contract with a school district in the state of Nebraska. An applicant will be allowed to apply to replace one bus.

Vehicles eligible for replacement will be type A, B, C, and D diesel-powered school buses that carry students to and from school or related events on a regular basis, are identified with the words "School Bus", and are painted National School Bus Glossy Yellow. Eligible vehicles will have diesel engines with model year 2009 or older.

The applicant will be required to certify that the existing bus is operational, in current use, and has at least three years of remaining life at the time of the replacement. The applicant also will be required to certify that the bus has logged at least 7,000 miles in each of the two years prior to submission of the application. Documentation of ownership, operation, and mileage during that two-year period will be required with the application.

The replacement bus must not be in a higher GVWR Class than the replaced vehicle and must resemble it in form and function. To be eligible, the replacement bus will be required to be powered by:

- A diesel or alternative-fuel engine (including gasoline), model year 2019 or newer, certified to meet EPA emissions standards (25% rebate, with maximum rebate of \$21,000); or
- An engine fueled by propane, model year 2019 or newer, certified to meet CARB Optional Low-NOx Emission Standards (35% rebate, with maximum rebate of \$33,000).

Priority will be given to buses with low-NOx propane engines. NDEE anticipates funding 2 Low-NOx propane and 4 diesel replacement buses. All entities that receive a rebate will be

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required to follow the scrappage requirements outlined in the FY2021 State Clean Diesel Grant Program Information Guide.

Non-Road Agricultural Diesel Engine Replacements:

NDEE will offer rebates to assist active farming operations in Nebraska with:

- 1) purchase of an electric motor and associated electrical infrastructure needed to replace a non-road diesel engine powering a surface agricultural irrigation pump; or
- 2) costs of supplying the infrastructure needed to connect an existing submersible irrigation pump to the electric grid as a replacement for a diesel engine powering a generator.

These projects will be eligible for a 60% rebate of equipment, labor, and electric power infrastructure costs, including electric utility line extension, up to a maximum rebate amount of \$20,000.

The applicant will be required to certify that they have owned the diesel irrigation engine for at least two years prior to replacement, that the engine has operated at least 250 hours per year during those two years, and that the engine has at least three years of remaining life at the time of the application.

NDEE anticipates funding 16 diesel irrigation engine replacement projects in this program. All entities that receive a rebate will be required to follow the scrappage requirements outlined in the FY2021 State Clean Diesel Grant Program Information Guide.

ROLES AND RESPONSIBILITIES:

NDEE will use 2021 State Clean Diesel Grant funds to support three rebate programs to replace diesel vehicles and engines in Nebraska. NDEE has successfully administered rebate programs with funding from EPA's State Clean Diesel Program to reduce diesel emissions since 2008, including funding from the American Recovery and Reinvestment Act from 2009 to 2012. Projects funded prior to 2013 included diesel emission control retrofits, auxiliary power units and aerodynamic equipment for long-haul trucks, diesel engine replacements, and vehicle replacements. Rebate recipients in these projects included both government and private-sector entities. From 2013 to 2016 NDEE administered an annual Clean Diesel School Bus Rebate Program. Beginning in 2017 rebate programs for local diesel truck replacements and diesel irrigation engine replacements were added to the Nebraska Clean Diesel Program, with 28 truck replacement projects and 100 irrigation engine replacement projects completed or underway. This experience demonstrates NDEE's ability to successfully carry out varied diesel emissions reduction rebate programs.

Replacement of Heavy-Duty Diesel Refuse Trucks:

NDEE will provide notice of the Heavy-Duty Diesel Truck Rebate Program to the public in Nebraska via the agency website, press release, and notices to trade associations and municipalities. We will modify existing application materials and instructions to conform with current requirements and develop selection criteria specific to this program. We will make the

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applications and instructions available on the agency website and work with public agencies and private companies as they develop their applications. NDEE will select the successful applicants and provide rebates directly to the recipients. The recipients will be expected to provide mandatory matching funds to complete the financial commitments required for their projects.

Replacement of Diesel School Buses:

NDEE will provide notice of the School Bus Rebate Program to public school districts and private schools in Nebraska via the agency website, press release, and by direct mail or e-mail. Application and reimbursement forms and instructions will also be available on the Nebraska Clean Diesel Program pages on the agency website. NDEE will develop selection criteria specific to this program, select the successful applicants, and provide rebates directly to the recipients. School districts and private schools will be expected to provide mandatory matching funds to complete the financial commitments required by their projects.

Non-Road Agricultural Diesel Engine Replacement:

NDEE will provide notice of the Irrigation Engine Rebate program via the agency website and a press release. Applicants for agricultural diesel engine replacement rebates will need to work with their electric service provider to determine the costs of electric line extension and other required infrastructure as well as the availability of incentives. NDEE therefore will directly notify all public power districts in Nebraska of the availability of Clean Diesel rebates for irrigation engine replacements. NDEE will also notify farm associations and the Natural Resource Districts (NRDs) in Nebraska, which manage surface and groundwater and work with irrigators in their districts.

NDEE will modify existing application materials and instructions to conform with current program requirements and make them available on the agency website. We will develop selection criteria specific to this program, assist applicants during the application process, select the successful applicants for rebates, and provide rebates directly to the recipients. Recipients will be expected to provide mandatory matching funds to complete the financial commitments required for their projects.

General Administration and Disbursement Procedures

The replacement vehicle or engine will be required to perform the same or similar function and operation as the unit being replaced. Replacement vehicles must be of similar type and not be in a higher gross vehicle weight rating class than the vehicle being replaced.

The replaced engine, or vehicle plus engine, will be required to be scrapped or rendered permanently disabled within 90 days of being replaced unless additional time is approved by EPA. Diesel engines will be scrapped by cutting a 3-in by 3-in hole in the engine block, or an equivalent scrapping method approved by EPA. A vehicle will be disabled by cutting the frame rails between the front and rear axles.

NDEE will maintain frequent contact with the successful applicants and provide assistance as needed to ensure that they stay on track to complete their projects within the specified time

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frame. After the new vehicle or engine has been delivered or installed, and prior to receiving reimbursement, applicants will be required to submit extensive documentation of the purchase along with documentation of scrapping of the old vehicle or engine:

1. Completed *Request for Reimbursement* form
2. Completed *Final Report* form
3. Photocopy of the purchase order for the new vehicle/engine and/or photocopy of the invoice for the new vehicle/engine and photo of the new engine label with the following information:
 - a. VIN number (for vehicle) or engine serial number (for replacement engine)
 - b. Engine model year
 - c. Engine manufacturer
 - d. EPA engine family if available
 - e. Vehicle/engine cost
4. Proof of Payment, such as a paid invoice or receipt, photocopy of the canceled check, bank statement showing the check has cleared, or credit card statement showing the payment has cleared
5. Proof of scrapping of the old engine via the EPA Certificate of Engine/Chassis Destruction or equivalent certification statement and:
 - a. Photo of the engine label that includes the engine serial number and EPA engine family
 - b. Photo of the engine block prior to scrapping
 - c. Photo of the engine block after scrapping, showing the hole cut in the block
6. Proof of scrapping of the old vehicle (if applicable) via the EPA Certificate of Engine/Chassis Destruction or similar certification statement and:
 - a. Side profile photo of the vehicle
 - b. Photo of vehicle label with Vehicle Identification Number (VIN)
 - c. Photos of chassis rails prior to scrapping
 - d. Photos of chassis rails after cutting

TIMELINE AND MILESTONES:

NDEE's 2021 Nebraska Clean Diesel Rebate Program will begin as soon as the grant award is made. Public notice and outreach of the program may begin in advance of the October 1 start of the 2021 grant year. During the first and second quarters of the grant year, NDEE will complete the solicitation and processing of rebate applications, will select rebate recipients, and prepare project agreements. Recipients will be notified during the second quarter to commence work on their project. NDEE will monitor project progress closely to encourage timely performance by the selected applicants. In particular, we will encourage participants in the irrigation engine replacement program to take early action to initiate their projects so that work can be completed prior to the start of the 2022 crop season. We anticipate that most recipients will complete their projects and receive reimbursements during the third and fourth quarters. NDEE will follow the timeline below, assuming receipt of the EPA award in August:

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Mid-September 2021: NDEE posts program information and application materials on the agency website and begins outreach to the target sectors.

October 1, 2021: NDEE begins accepting rebate applications.

January 13, 2022: Deadline for submission of rebate applications to NDEE.

January 14-25, 2022: Review of rebate applications and selection of rebate recipients.

January 28, 2022: Notification of rebate recipients.

February 11, 2022: Project agreements provided to rebate recipients. Public notification of rebate projects posted on NDEE website.

February 28, 2022: Deadline for rebate recipients to return signed agreements to NDEE. Commence Work Notifications sent to recipients as signed agreements are received.

March 2022–August 2023: Rebate recipients purchase vehicles or purchase and install equipment. NDEE monitors rebate recipients for project progress, and issues rebates as projects are completed.

August 31, 2023: Deadline for recipients to complete their project and submit complete reimbursement requests with documentation of scrappage.

DERA PROGRAMMATIC PRIORITIES:

NDEE's 2020 DERA Clean Diesel Rebate Programs will be targeted to achieve significant reductions in diesel emissions in areas designated as poor air-quality areas and/or emissions that lead to exposure of especially vulnerable populations.

Replacement of Heavy-Duty Diesel Trucks:

Diesel refuse trucks operate in all cities and towns in Nebraska. NDEE will give preference to trucks operating in Douglas County (EPA priority county including the City of Omaha) and in other urban areas. Providing rebates to replace older diesel trucks with newer and cleaner trucks will produce significant reductions in diesel emissions in these priority areas.

Replacement of Diesel School Buses:

Most applicants for Nebraska's School Bus Rebate programs have been smaller rural school districts. It is common for rural districts to bus students over long distances, especially for athletic events at other schools. These long travel distances in older buses increase the exposure of school children to diesel emissions from the bus tailpipe and crankcase. Schools in consolidated rural school districts are typically in residential areas in the more populated towns in the county; bus idling at the school therefore exposes not only school children, but also nearby residents to elevated levels of diesel emissions. Providing rebates to school districts to replace older, more highly-polluting buses with new, cleaner buses is a cost-effective use of DERA funding to reduce diesel exposure for children and communities.

Non-Road Agricultural Diesel Engine Replacement:

NDEE will give preference to projects that are in close proximity to population centers that might be affected by these diesel emissions.

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

Linkage: The actions outlined in this workplan support Goal 1, Objective 1.1, “Improve Air Quality”, of EPA’s 2018-2022 Strategic Plan. Reducing emissions from diesel engines is an important component of the reduction of local and regional air pollution, thereby supporting EPA’s goal of “continued progress in reducing public health risks and improving the quality of the environment.” Replacement of older, more polluting diesel engines and vehicles with new, less polluting units reduces diesel emissions, thus directly reducing the local and regional risk from criteria pollutants (particulate matter, NO_x, and ozone), air toxics, and greenhouse gases.

Outputs: The primary output of this program will be the replacement of older, more polluting diesel vehicles and engines with new, cleaner units. This output will be measurable in terms of the number of replacements funded and completed, which will depend upon the mix of replacement applications received and the replacement technologies proposed.

NDEE will disseminate information about the program or programs and the available technologies via the agency website, mail, and e-mail. These public outreach efforts will raise community awareness of the importance of reducing diesel emissions.

NDEE will track and measure the progress made by the rebate recipients and provide quarterly reports to EPA summarizing this progress. NDEE will also provide a final report on the program to EPA.

Outcomes: Nebraska’s proposed 2021 Clean Diesel Rebate Program will produce significant reductions in diesel emissions and thereby reduce the exposure of vulnerable populations to these emissions. In addition, NDEE’s outreach efforts will lead to increased community awareness of the importance and health benefits of emissions reductions and will promote institutional behavioral changes to reduce diesel vehicle idling where possible

Replacement of Heavy-Duty Diesel Refuse Trucks

Reducing truck diesel emissions would have immediate impact in densely populated urban areas that include vulnerable populations, including the elderly, children, and people with respiratory conditions. Over the long term, these emissions reductions should lead to reduced respiratory disease and complications in these populations.

Table 1 below shows estimated annual reductions in emissions that would result from the budgeted replacement of five heavy-duty diesel trucks, with three diesel replacements and two CNG replacements. All original trucks are assumed to have a 2005 diesel engine, annual fuel use of 10,000 gallons, 20,000 annual miles, and 500 hours idling (approximate average values from past truck replacement projects).

Table 1: Estimated annual aggregate emission reductions for replacement of five heavy-duty diesel refuse trucks, computed using the EPA Diesel Emissions Quantifier. The increase in carbon monoxide emissions shown is attributed to higher emissions from CNG-fueled engines in comparison to diesel engines.

| Annual Results (short tons) | NOx | PM2.5 | HC | CO |
|-----------------------------|-------|-------|-------|--------|
| Baseline | 0.663 | 0.063 | 0.063 | 0.238 |
| Amount Reduced | 0.615 | 0.062 | 0.057 | -0.146 |
| Percent Reduced | 92.8% | 97.3% | 89.7% | -61.3% |

Assuming the replaced trucks would have operated for another five years, the lifetime reductions from these projects would be 3.08 tons of NOx, 0.308 ton of PM_{2.5}, and 0.285 ton of hydrocarbons.

Replacement of Diesel School Buses

Table 2 below shows estimated annual reductions in emissions that would result from the budgeted replacement of 10 diesel school buses, with 8 diesel replacements and 2 low-NOx propane replacements. All original buses are assumed to have a 2002 diesel engine, annual fuel use of 1,330 gallons, 9,400 annual miles, and 50 hours idling (approximate average values from past school bus replacement projects).

Table 2: Estimated annual aggregate emission reductions for replacement of ten diesel school buses, computed using the EPA Diesel Emissions Quantifier.

| Annual Results (short tons) | NOx | PM2.5 | HC | CO |
|-----------------------------|-------|-------|-------|-------|
| Baseline | 0.815 | 0.056 | 0.159 | 0.386 |
| Amount Reduced | 0.753 | 0.055 | 0.015 | 0.319 |
| Percent Reduced | 92.4% | 97.8% | 94.3% | 82.5% |

Replacement of Non-Road Agricultural Diesel Engines

Table 3 below shows estimated annual reductions in emissions that would result from replacement of 17 diesel irrigation engines with all-electric replacements. Engines are assumed to be 2000 model year, 125 horsepower, with annual fuel use of 5,125 gallons and 1,025 annual operating hours.

Table 3: Estimated aggregate annual emission reductions from replacing 17 diesel irrigation engines with all-electric equipment, computed using the Diesel Emissions Quantifier.

| Annual Results (short tons) | NOx | PM2.5 | HC | CO |
|-----------------------------|-------|-------|-------|-------|
| Baseline | 6.127 | 0.487 | 0.376 | 1.083 |
| Amount Reduced | 6.127 | 0.487 | 0.376 | 1.083 |
| Percent Reduced | 100% | 100% | 100% | 100% |

Assuming that the replaced engines would have operated for another 5 years, lifetime emissions reductions would be approximately 30.6 tons of NOx, 2.4 tons of PM_{2.5}, 1.8 tons of hydrocarbons, and 5.4 tons of carbon monoxide.

SUSTAINABILITY OF THE PROGRAM:

NDEE will continue to promote (and assist stakeholders in finding) reasonable and practical solutions to reduce diesel emissions and consumption of diesel fuel. These efforts will include promoting behavioral changes to reduce idling of diesel engines at schools and educational efforts on the health benefits of replacing older diesel vehicles and engines. NDEE will promote these ideas and practices on the agency website and through distribution of informational materials.

BUDGET NARRATIVE

2021 Itemized Project Budget

| Budget Category | EPA Allocation | Voluntary Match (if applicable) | | Line Total |
|--|----------------|---------------------------------|-------------|------------|
| | | VW Mitigation Trust Funds | Other Funds | |
| 1. Personnel | \$ 13,212 | \$ 13,805 | | \$ 27,017 |
| 2. Fringe Benefits | \$ 3,865 | \$ 4,038 | | \$ 7,903 |
| 3. Travel | \$ 406 | \$ 406 | | \$ 812 |
| 4. Equipment | | | | |
| 5. Supplies | | \$ 100 | | \$ 100 |
| 6. Contractual | | | | |
| 7a. Other | | \$ 200 | | \$ 200 |
| 7b. Other (Participant Support Costs) | \$ 488,000 | \$ 330,000 | | \$ 818,000 |
| 8. Total Direct Charges (sum 1-7) | \$ 505,483 | \$ 348,549 | | \$ 854,032 |
| 9. Indirect Charges | \$ 4,871 | \$ 5,090 | | \$ 9,961 |
| 10. Total (Indirect + Direct) | \$ 510,354 | \$ 353,639 | | \$ 863,993 |
| 11. Program Income | \$ 0 | \$ 0 | | \$ 0 |

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Detailed Project Budget, 2021 DERA Grant Year

| Budget Category | EPA Funds \$ 510,354 | Voluntary State Match \$ 525,639 | Total 2021 Project Cost |
|---|-------------------------------------|---|--------------------------------|
| 1. Personnel | \$ 13,212 | \$ 13,805 | \$ 27,017 |
| Project Manager: \$24/hr x 550.5 hours (26.5% time) | \$ 13,212 | | |
| Project Manager: \$24/hr x 462.7 hours (22% time) | | \$ 11,105 | |
| Supervisor: \$50/hr x 54 hours (2.5% time) | | \$ 2,700 | |
| 2. Fringe Benefits (29.25% of personnel costs) | \$ 3,865 | \$ 4,038 | \$ 7,903 |
| 3. Travel: | \$ 406 | \$ 406 | \$ 812 |
| Equipment inspection mileage: 745 miles @ \$0.545 per mile | \$ 406 | | |
| Equipment inspection mileage: 745 miles @ \$0.545 per mile | | \$ 406 | |
| 4. Equipment | | | |
| 5. Supplies | | \$ 100 | \$ 100 |
| 6. Contractual | | | |
| 7. Other | | \$ 200 | \$ 200 |
| Other - Participant Support Costs | \$ 488,000 | \$ 330,000 | \$ 818,000 |
| 2 Low-NOx Propane School Buses @ \$94,286 (35% rebate, maximum \$33,000) | | \$ 66,000 | \$ 66,000 |
| 4 Diesel School Buses @ \$ 84,000 (25% rebate, maximum \$21,000) | \$ 84,000 | | \$ 84,000 |
| 2 CNG Refuse Trucks @ \$342,857 (35% rebate, maximum \$120,000) | \$ 120,000 | \$ 120,000 | \$ 240,000 |
| 2 Diesel Refuse Trucks @ \$280,000 (25% rebate, maximum \$70,000) | \$ 140,000 | | \$ 144,000 |
| 16 Diesel Irrigation Engine Electric Replacements @ \$30,000 (60% rebate = \$18,000; max \$20,000) | \$ 144,000 | \$ 144,000 | \$ 288,000 |
| 8. Total Direct Charges | \$ 505,483 | \$ 348,549 | \$ 854,032 |
| 9. Indirect Charges (46.62% of personnel) | \$ 4,871 | \$ 5,090 | \$ 9,961 |
| GRAND TOTAL | \$ 510,354 | \$ 353,639 | \$ 863,993 |

Explanation of Budget Framework

- **Personnel**

Salaries for NDEE Project Manager (47% time, 980 hours @ \$24/hour) and NDEE Supervisor (2% time, 40 hours @ \$50/hour).

- **Fringe Benefits**

29.5% of Personnel Cost, covering health insurance, retirement, unemployment, and leave.

- **Travel**

One or more inspections trips by NDEE personnel for a selected group of rebate recipients to verify eligibility of vehicles/equipment to be replaced and/or project completion. Estimated mileage is 745 miles at 54.5 cents per mile.

- **Supplies**

Identification stickers for replacement vehicles and irrigation motors.

- **Equipment**

None

- **Contractual**

None

- **Other**

Postage; Participant Support Costs (rebates paid to applicants for vehicle and engine replacements).

- **Indirect Charges**

46.62% of Personnel Costs.

Administrative Costs Expense Cap

The budgeted administrative costs (sum of personnel, benefits, travel, and supplies) for this grant are \$34,096, or 3.3% of the available project funds (\$1,036,381, the sum of federal and state matching funds). This amount is less than the 15% cap on administrative costs.

Matching Funds and Cost-Share Funds

Voluntary state matching funds will be provided via a funding request to the Volkswagen Diesel Emissions Mitigation Trust for States. Rebate recipients will be expected to provide mandatory cost-share funds for their projects.