

**BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION (Revised)**

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Beneficiary State of Arkansas

Lead Agency Authorized to Act on Behalf of the Beneficiary Arkansas Department of Energy and Environment Quality (E&E) Division of Environmental Quality (DEQ)

*(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)*

<b>Action Title:</b>	Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses)
<b>Beneficiary's Project ID:</b>	ABC Transportation Program
<b>Funding Request No.</b>	<i>(sequential)</i>
<b>Request Type: (select one or more)</b>	Reimbursement <span style="float: right;">Advance</span> <input checked="" type="checkbox"/> Other (specify): Reimbursement and advance payment of administrative expenses (Already completed)  Funding to be moved to disbursement account at a later date for subrecipient support
<b>Payment to be made to: (select one or more)</b>	<input checked="" type="checkbox"/> Beneficiary <input checked="" type="checkbox"/> Other (specify): Funding request and direction for administrative fees was included with a previous version of this submission. Funding request and direction for subrecipient expenses to be submitted later as projects under this program are implemented
<b>Funding Request &amp; Direction (Attachment A)</b>	Funding Request & Direction for Administrative Expenses has already been processed  Funding Request & Direction for Program Participant Support to be submitted at a later time.

**SUMMARY**

**Eligible Mitigation Action**  Appendix D-2 item (specify): Class 4-8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses)

**Action Type**  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):**

This Eligible Mitigation Action Certification (EMAC) implements the ABC program described in section IV. A. of the Arkansas's Beneficiary Mitigation Plan.

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

The ABC program will provide funding assistance for projects that reduce emissions by replacing eligible diesel school buses or transit buses with alternate-fueled (low NOx compressed natural gas, propane, or liquefied natural gas), electric hybrid, or all-electric vehicle technologies.

Eligible vehicles for replacement under this program include diesel-powered vehicles with an engine model year 2009 or older that fall into one of the following categories:

- Class 4–8 School Bus, Shuttle Bus, or Transit Bus (Eligible Buses)

Eligible vehicles may be:

- Replaced with any Alternate-Fueled, Hybrid, or All-Electric Bus.
- Each bus to be replaced must have accumulated at least 7,000 miles per year on average during calendar years 2020 and 2021. Scrappage of replaced equipment is required.

Awards for this program are offered on a competitive basis. Applications were evaluated based on the following criteria:

- Share of the air pollution burden;
- Project benefits;
- Programmatic capability; and
- Partnerships.

Only organizations that meet the definition of “Government” under the Environmental Mitigation Trust Agreement were eligible to apply.

The proposed projects are listed in the table below.

<b>Applicant</b>	<b>Number of School Buses</b>	<b>Project Type (all-electric, LPG, etc.)</b>	<b>Vehicle to be replaced</b>
Mountain Home SD	5	All-electric	A 1998 diesel bus, three 2007 diesel buses, and a 2009 diesel bus
Jacksonville North Pulaski SD	10	LPG	Seven 2006 diesel buses, a 2007 diesel bus, and two 2008 diesel buses
Alma SD	8	All-electric	Eight 1992 diesel buses
Pulaski County Special SD	20	LPG	Eight 2006 diesel buses, seven 2001 diesel buses, three 2007 diesel buses, and two 2008 diesel buses

**Estimate of Anticipated NOx Reductions (5.2.3):**

<b>Actual emissions reductions in the table below were calculated using the EPA Diesel Emission Quantifier Applicant</b>	<b>Number of School Buses</b>	<b>Project Type (all-electric, LPG, etc.)</b>	<b>Lifetime Emissions Reductions (tons)</b>
Mountain Home SD	5	All-electric	207.53
Jacksonville North Pulaski SD	10	LPG	1.3
Alma SD	8	All-electric	323.28

Pulaski County Special SD	20	LPG	11.28
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**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):**

Arkansas Department of Finance and Administration

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

DEQ will post this EMAC minus Attachments A and D, as well as project application instructions for the program described in this EMAC to <https://www.adeg.state.ar.us/air/planning/vw.aspx>. DEQ will upload information required in the semi-annual reports to the Trustee, including estimated emissions reductions, program implementation milestones, and project recipients and awards; to the same webpage.

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

Only organizations meeting the definition of “Government” under the Environmental Mitigation Trust Agreement are eligible to apply. No cost-share is required. The maximum funding assistance amount under the ABC program is based on the bus type and the replacement bus fuel type. The table below provides the amounts that DEQ will allocate for selected applicants per bus. DEQ will not provide reimbursement in excess of actual eligible project costs. Selected project sponsors are responsible for any costs in excess of the maximum funding assistance amounts specified in the table below.

**Maximum Funding Amount per Replacement Bus**

Bus Type	Replacement Bus Fuel Type	
	Alternative-Fuel	All-Electric*
School Bus	\$98,000	\$375,000
Transit Bus	\$405,000	\$716,000

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

On February 28, 2018, ADEQ provided notice to the US. Fish and Wildlife Service, National Park Service, and the Forest Service of Arkansas’s designation as a Beneficiary under the Trust. These notices were sent to the email addresses listed in the Trust Agreement and included a letter from Stuart Spencer, Associate Director of the Office of Air Quality at DEQ, the Environmental Mitigation Trust Agreement for State Beneficiaries, the Notice of Beneficiary Designation, and the Amended D-3 Certification with Attachment. These federal land managers were also provided with a link to <https://www.adeg.state.ar.us/air/planning/vw.aspx>, where DEQ is posting information related to DEQ’s implementation of Arkansas’s beneficiary mitigation plan. These notifications have been posted to the webpage.

**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).**

The application evaluation process included three metrics related to how the application mitigates the impacts of NOx emissions on communities that have historically borne a disproportionate share of the adverse impacts from NOx emissions.

*Metric 1: # of settlement subject vehicles registered in county (based on percentage of total vehicles registered)*

**Metric 2: Onroad NOx Emissions**

*(based on percentage of total emission inventory)*

*Metrics: Ozone and PM2.5 NAAQS Design Values: (Historic values near to or exceeding the level of the NAAQS)*

Additional points were awarded based on the applicant's description of project benefits including the extent to which the project reduces environmental risks to the public, sensitive populations, economically disadvantaged populations, and other populations with disproportionately high and adverse human health or environmental impacts.

**ATTACHMENTS**  
**(CHECK BOX IF ATTACHED)**

- |                                     |                     |                                                                                                                                                                                                       |
|-------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/>            | <b>Attachment A</b> | <b>Funding Request and Direction.</b>                                                                                                                                                                 |
| <input checked="" type="checkbox"/> | <b>Attachment B</b> | <b>Eligible Mitigation Action Management Plan Including Detailed Budget and Implementation and Expenditures Timeline (5.2.4).</b>                                                                     |
| <input type="checkbox"/>            | <b>Attachment C</b> | <b>Detailed Plan for Reporting on Eligible Mitigation Action Implementation (5.2.11).</b>                                                                                                             |
| <input checked="" type="checkbox"/> | <b>Attachment D</b> | <b>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.]</b> |
| <input type="checkbox"/>            | <b>Attachment E</b> | <b>DERA Option (5.2.12). [Attach only if using DERA option.]</b>                                                                                                                                      |
| <input type="checkbox"/>            | <b>Attachment F</b> | <b>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.]</b> |

**CERTIFICATIONS**

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

1. This application is submitted on behalf of Beneficiary State of Arkansas, 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:

11-22-22



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David Witherow, P.E.  
Associate Director, Office of Air Quality

Arkansas Department of Energy and  
Environment

\_\_\_\_\_  
[LEAD AGENCY]

for

State of Arkansas

\_\_\_\_\_  
[BENEFICIARY]

**ATTACHMENT B**

**ABC Revised PROJECT MANAGEMENT PLAN**

**PROGRAM SCHEDULE AND MILESTONES**

The Advanced Bus and Clean (ABC) Transportation program will provide funding assistance on a competitive basis for Arkansas school districts and transit authorities seeking to replace eligible diesel school and transit buses with all-electric, hybrid or alternative-fuel buses. The goal of the ABC Transportation program is to reduce emissions of nitrogen oxides (NOx) from Arkansas fleets and to encourage the development of alternative fuel infrastructure within the state.

Milestone	Time Required	Target Date(s)
Application Period	60 days	September 1, 2022- October 31,2022
Application Review, Project Selection; and Coordination of Signatures for MOAs for Selected Projects  <i>(All funds are committed after this milestone is complete. Press releases with respect to awards can go out.)</i>	30 days	November 1 – November 30, 2022
Project Implementation  <i>(Our experience with Clean Fuels during the pandemic indicates that more time may be required due to supply chain constraints. Extensions would be granted on a case-by- case basis.)</i>	6 months	May 31, 2023
Processing of Reimbursement Requests and Check Issuance from Disburser to Reimburse for Selected Projects	15 days	July 1, 2023

**PROGRAM BUDGET**

A total of \$7,941,175 was previously allocated to the ABC Transportation Program, with an estimated \$7,671,687 to be awarded to program participants for completing projects and \$269,488 for administrative costs associated with running the program. After conferring with Michael Bochanski of Wilmington Trust, DEQ understands that Arkansas’s Trust Account has earned \$615,075.03 in interest. Therefore, we are revising our the ABC budget to add an additional \$143,131 for program participants support to fund ABC projects. The revised budget is summarized below.

<b>Period of Performance: <u>Fall 2022 to Fall 2023</u></b>	
<b>Budget Category</b>	<b>Share of Total Program Budget to be funded by the Trust</b>
Program Participants Support	\$7,815,000
Administrative	\$269,488
<b>Project Totals</b>	<b>\$8,084,488</b>



**PROJECTED TRUST ALLOCATIONS:**

The table below indicates anticipated funds to be drawn down from Arkansas’s allocation under the Trust for the ABC Transportation Program. The amounts in this table reflect only the portion of Arkansas’s allocation allotted to the ABC Transportation Program in the Arkansas Beneficiary Mitigation Plan.

<b>Project Trust Allocations</b>	<b>2022</b>	<b>2023</b>
1. Anticipated Annual Project Funding Request to be paid through the Trust	\$ 269,488	\$ 7,815,000
2. Anticipated Annual Cost Share		
3. Anticipated Total Project Funding by Year (line 1 plus line 2)	\$269,488	\$7,815,000
4. Cumulative Trustee Payments Requested to Date Against Cumulative Beneficiary Allocation	\$5,566,647	\$5,836,135
5. Current Beneficiary Project Funding to be Paid through Trust (line 1)	\$269,488	\$7,815,000
6. Total Funding Requested by Beneficiary, inclusive of Current Action by Year (line 4 plus line 5)	\$5,836,135	\$13,651,135
7. Total Funding Allocated to Beneficiary	\$14,647,909	\$14,647,909
8. Net Beneficiary Funds Remaining in Trust, net of cumulative Beneficiary Funding Actions (Line 7 minus line 6)	\$8,811,774	\$996,774
9. Trust funds interest accumulated to-date 11/18/22		\$615,075.03
10. Net Beneficiary Funds Remaining in Trust, Plus interest accumulated for Trust fund investments (Line 8 plus line 9)		\$1,611,849.03

## **ATTACHMENT C**

### **DETAILED PLAN FOR REPORTING ON ELIGIBLE MITIGATION ACTION IMPLEMENTATION**

The Arkansas Department of Energy and Environment (E&E), Division of Environmental Quality (DEQ) will provide detailed reporting on the Advanced Bus and Clean (ABC) Transportation Program in two ways: 1) timely updates to DEQ's Volkswagen Mitigation Trust web page and 2) semiannual reporting to Wilmington Trust.

#### 1. DEQ Volkswagen Mitigation Trust webpage

DEQ maintains a Volkswagen Mitigation Trust web page that has been designed to disseminate information regarding Arkansas's beneficiary mitigation plan and implementation of that plan. The web page is located at <https://www.ADEQ.state.ar.us/air/planning/vw.aspx>. Guidance on how to apply for reimbursement under the ABC Transportation Program is accessible via this web page. DEQ will post the Eligible Mitigation Action Certification (EMAC) and Attachments B and C to this web page. DEQ will also upload information to this web page including estimated emission reductions, program implementation milestones, and project recipients and awards.

#### 2. Semiannual reporting to Wilmington Trust

The State Beneficiary Trust Agreement establishes the following requirements for reporting for each Eligible Mitigation Action to the Trustee:

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 implementing each Eligible Mitigation Action during the six-month period leading up to 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 Trust's public-facing website upon receipt.

DEQ has developed a report template for documenting implementation of the ABC Transportation Program. This template includes information for each budget category, including:

- Mitigation Funds Expended for the Current Reporting Period
- Voluntary Additional Cost-Share Expended for the Current Reporting Period
- Cumulative Mitigation Funds Expended
- Cumulative Voluntary Additional Cost-Share Expended

In addition, the template asks the following questions that will be answered for each reporting period:

- What actual accomplishments occurred during the reporting period?
- Were funds awarded for any projects under the Eligible Mitigation Action Plan during the current reporting period? If so, list the recipients and how much funding they received.
- Provide a comparison of actual accomplishments with the anticipated outputs/outcomes and timelines/milestones specified in the Eligible Mitigation Action Management Plan.
- If anticipated outputs/outcomes and/or timelines/milestones are not met, why not? Did you encounter any problems during the reporting period which may interfere with meeting the project objectives?
- How do you propose to remedy any problems? Identify how and the date you will get back on course to meet the anticipated outputs/outcomes and/or timelines/milestones specified in the Eligible Mitigation Action Management Plan.
- If any cost-shares are reported for this Reporting Period in Table 1 above, identify the source of the funds.
- Did any public relations events regarding this program take place during the reporting period?
- What is the URL for the state website where members of the public can find information about implementation of this Eligible Mitigation Action?

The template will also include a section for inputting project-specific details including the following:

- Type of Project: Replacement
- Fleet Owner
- Primary Place of Performance
  - State,
  - County,
  - City,
  - ZIP Code
- Eligible Vehicle/Equipment Information
  - Vehicle Size Class
  - Vehicle Type
  - Vehicle Identification Number
  - Vehicle Make
  - Vehicle Model
  - Vehicle Model Year
  - Engine Serial Number

- Engine Model Year
- Engine Horsepower
- Engine Fuel Type
- Annual Amount of Fuel Used
- Annual Miles Traveled
- Annual Idling Hours
- Remaining Life of Engine
- New Vehicle/Equipment Information
  - Fleet Owner
  - Primary Place of Performance
    - State,
    - County,
    - City,
    - ZIP Code
  - Vehicle Size Class
  - Vehicle Type
  - Vehicle Identification Number
  - Vehicle Make
  - Vehicle Model
  - Vehicle Model Year
  - Engine Serial Number
  - Engine Model Year
  - Engine Horsepower
  - Engine Fuel Type

# **ATTACHMENT D**

# Advanced Bus and Clean (ABC) Transportation Program

version 2.4

(Submission #: HPM-0E4E-81G9P, version 1)

## Details

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<b>Submitted</b>	10/21/2022 (30 days ago) by Jason Rutherford
<b>Applicant</b>	Alma School District
<b>Submission ID</b>	HPM-0E4E-81G9P
<b>Submission Assigned Staff</b>	Mikayla Shaddon
<b>Status</b>	Deemed Complete
<b>Active Steps</b>	Provide Application to Evaluation Committee

## Form Input

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### Applicant Information

**Applicant Organization Name**  
Alma School District

**Type of Organization**  
School District

**Applicant Organization Mailing Address**

916 Hwy 64 E  
Alma, AR 72921

**Organizational DUNS number**  
100685866

**Congressional District**  
4th

If you do not know your congressional district, you can find this information at <https://argis.ualr.edu/DistrictFinder/index.html>.

[Click here to be directed to the UALR District Finder](https://argis.ualr.edu/DistrictFinder/index.html)

## **Project Manager Contact Information**

<b>First Name</b>	<b>Last Name</b>	
Jason	Rutherford	
<b>Title</b>		
<i>Transportation Director</i>		
<b>Phone Type</b>	<b>Number</b>	<b>Extension</b>
Business	4796324794	
<b>Email</b>		
jrutherford@almasd.net		
<b>Fax</b>		
NONE PROVIDED		

## **Description of Applicant's Organization**

### **Describe the work typically performed by the Applicant Organization**

We are a public school system that educates students in grades K-12. We believe that all students have the opportunity and responsibility to learn, both academically and personally, in their pursuit of becoming successful adults. Furthermore, our staff is responsible for creating the environment so that students can do so.

We maintain high-quality programs that are overseen by high-quality staff in schools that are safe and inviting, with strong community involvement. As a result, students graduate ready for post-high school life, due to the many opportunities afforded to them through academic and co-curricular programs.

We achieve this by recruiting and retaining high-quality staff, providing technology and other resources needed for learning, increasing reading and ACT outcomes, providing outstanding curriculum opportunities, and maintaining the resources to be able to provide the best program possible.

### **Number of Persons Employed by the Applicant Organization**

434

### **Number of Years Applicant Organization Has Been in Existence in Arkansas**

100

## **Describe any Energy or Environmental Conservation Measures that the Applicant Organization Already Practices**

In 3 years, we have completely switched to LED lights all across the district.

All of our HVAC units are connected to an energy management system that can be controlled by the district. The system detects occupied and unoccupied times in the buildings.

Over 50% of the lighting throughout the district is on a motion sensor. The lights are activated based on motion in the area.

We utilize a recycling program at all campuses.

## **Describe any Past Performance in Successfully Completing and Managing Projects Similar in Size, Scope, and Relevance to the Proposed Project**

We have partnered with CLEARresult to assure that we are making strides to be more energy efficient in all areas. CLEARresult is the largest provider of energy efficiency, energy transition, and decarbonization solutions in North America.

Clear results have helped us to be more energy efficient in all areas, especially in lighting. We made the switch from incandescent lights to LED lights in all academic buildings over the span of 3 years. CLEARresult has also guided us in how to conserve energy in other areas as well.

## **Project Details (1 of 8)**

### **Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

### **Existing Vehicle Details**

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#### **Existing Vehicle Type**

Diesel-Powered School Bus

#### **Typical Function of Existing Bus Involved in the Proposed Project**

The existing bus is used daily (Monday through Friday) on a route, picking up students for school and delivering them home. It is also occasionally used for in town field trips and shuttles.

#### **Existing Bus Operation Frequency and Time of Use**

The existing bus is used 180 days out of the year (while school in session, Monday through Friday). It is used roughly 3 1/2 hours a day, but sometimes more.



**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Crawford

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABMCBA7NF051563

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

1992

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2BK18686	NA	Caterpillar	3116	1992	250	Ultra-Low Sulfur Diesel (ULSD)	900
							Sum: 900

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	7200
2021	7200
	Average: 7200

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

4

**New Vehicle Details**

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**Replacement Bus Fuel Type**

All-Electric

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

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EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Nitrogen Oxides (NOx)	.174	.695
Fine Particulate (PM2.5)	.007	.026
Hydrocarbons (HC)	.018	.07
Carbon Monoxide (CO)	.043	.171
Carbon Dioxide (CO2)	11.9	47.8
	Sum: 12.142	Sum: 48.762

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

We used the Diesel Emissions Quantifier from the EPA Website.

**Maximum Funding Assistance for this Replacement Bus**

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The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

375,000

**Project Details (2 of 8)**

**Diesel-Powered School Bus; `EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

### Existing Vehicle Details

---

#### Existing Vehicle Type

Diesel-Powered School Bus

#### Typical Function of Existing Bus Involved in the Proposed Project

The existing bus is used daily (Monday through Friday) on a route, picking up students for school and delivering them home. It is also occasionally used for in town field trips and shuttles.

#### Existing Bus Operation Frequency and Time of Use

The existing bus is used 180 days out of the year (while school in session, Monday through Friday). It is used roughly 3 1/2 hours a day, but sometimes more.

#### In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?

Crawford

#### On-Highway Weight Class

Class 7: 26,001 – 33,000 lbs.

#### Vehicle Identification Number

1BABMCBAXNF051556

#### Vehicle Make

Blue Bird

#### Vehicle Model

All American

#### Vehicle Model Year

1992

#### Highway Engine Information (Complete one row for each engine that powers the existing vehicle)

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
6I2232	NA	Caterpillar	3116	1992	250	Ultra-Low Sulfur Diesel (ULSD)	832

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
							Sum: 832

### Annual Miles Traveled

Year	Annual Miles (Miles per Year)
2020	6660
2021	6660
	Average: 6660

### Number of days operated per week (on average) in 2020 and 2021

5

### Remaining Life (Years)

4

### New Vehicle Details

---

#### Replacement Bus Fuel Type

All-Electric

#### Percentage of Time the Affected Equipment will be Operated in Arkansas

100

### Emission Reductions Anticipated from the Proposed Project

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	.174	.695
Fine Particulate (PM2.5)	.007	.026
Hydrocarbons (HC)	.018	.07
Carbon Monoxide (CO)	.043	.171
Carbon Dioxide (CO2)	11.9	47.8
	Sum: 12.142	Sum: 48.762

### Describe the methodology used to calculate estimated emissions reductions from the proposed project.

We used the Diesel Emissions Quantifier from the EPA Website.

## **Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

### **Maximum Funding Assistance for Replacement of this Bus(\$)**

375,000

## **Project Details (3 of 8)**

### **Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

### **Existing Vehicle Details**

---

#### **Existing Vehicle Type**

Diesel-Powered School Bus

#### **Typical Function of Existing Bus Involved in the Proposed Project**

The existing bus is used daily (Monday through Friday) on a route, picking up students for school and delivering them home. It is also occasionally used for in town field trips and shuttles.

#### **Existing Bus Operation Frequency and Time of Use**

The existing bus is used 180 days out of the year (while school in session, Monday through Friday). It is used roughly 3 1/2 hours a day, but sometimes more.

#### **In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Crawford

#### **On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

#### **Vehicle Identification Number**

1BABMCBA5NF051562

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

1992

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2BK18711	NA	Caterpillar	3116	1992	250	Ultra-Low Sulfur Diesel (ULSD)	1305
							Sum: 1305

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	10440
2021	10440
	Average: 10440

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

4

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

All-Electric

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	.174	.695
Fine Particulate (PM2.5)	.007	.026
Hydrocarbons (HC)	.018	.07
Carbon Monoxide (CO)	.043	.171
Carbon Dioxide (CO2)	11.9	47.8
	Sum: 12.142	Sum: 48.762

### Describe the methodology used to calculate estimated emissions reductions from the proposed project.

We used the Diesel Emissions Quantifier from the EPA Website.

### Maximum Funding Assistance for this Replacement Bus

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

### Maximum Funding Assistance for Replacement of this Bus(\$)

375,000

### Project Details (4 of 8)

#### Diesel-Powered School Bus;`EngineModelYear`

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

#### Existing Vehicle Details

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

The existing bus is used daily (Monday through Friday) on a route, picking up students for school and delivering them home. It is also occasionally used for in town field trips and shuttles.

**Existing Bus Operation Frequency and Time of Use**

The existing bus is used 180 days out of the year (while school in session, Monday through Friday). It is used roughly 3 1/2 hours a day, but sometimes more.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Crawford

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABMCBA2NF051566

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

1992

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2BK18645	NA	Caterpillar	3116	1992	250	Ultra-Low Sulfur Diesel (ULSD)	630
							Sum: 630

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	5040



Year	Annual Miles (Miles per Year)
2021	5040
	Average: 5040

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

4

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

All-Electric

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	.174	.695
Fine Particulate (PM2.5)	.007	.026
Hydrocarbons (HC)	.018	.07
Carbon Monoxide (CO)	.043	.171
Carbon Dioxide (CO2)	11.9	47.8
	Sum: 12.142	Sum: 48.762

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

We used the Diesel Emissions Quantifier from the EPA Website.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of

Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

375,000

**Project Details (5 of 8)**

**Diesel-Powered School Bus; `EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

The existing bus is used daily (Monday through Friday) on a route, picking up students for school and delivering them home. It is also occasionally used for in town field trips and shuttles.

**Existing Bus Operation Frequency and Time of Use**

The existing bus is used 180 days out of the year (while school in session, Monday through Friday). It is used roughly 3 1/2 hours a day, but sometimes more.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Crawford

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABMCBA5NF051559

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

1992

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2BK18731	NA	Caterpillar	3116	1992	250	Ultra-Low Sulfur Diesel (ULSD)	1642
							Sum: 1642

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	13140
2021	13140
	Average: 13140

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

4

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

All-Electric

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	.174	.695
Fine Particulate (PM2.5)	.007	.026

<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Hydrocarbons (HC)	.018	.07
Carbon Monoxide (CO)	.043	.171
Carbon Dioxide (CO2)	11.9	47.8
	Sum: 12.142	Sum: 48.762

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

We used the Diesel Emissions Quantifier from the EPA Website.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

375,000

**Project Details (6 of 8)**

**Diesel-Powered School Bus; `EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

The existing bus is used daily (Monday through Friday) on a route, picking up students for school and delivering them home. It is also occasionally used for in town field trips and shuttles.

**Existing Bus Operation Frequency and Time of Use**

The existing bus is used 180 days out of the year (while school in session, Monday through Friday). It is used roughly 3 1/2 hours a day, but sometimes more.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Crawford

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABMCBA6NF051568

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

1992

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2BK18688	NA	Caterpillar	3116	1992	250	Ultra-Low Sulfur Diesel (ULSD)	625
							Sum: 625

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	5000
2021	5000
	Average: 5000

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

4

## New Vehicle Details

---

### Replacement Bus Fuel Type

All-Electric

### Percentage of Time the Affected Equipment will be Operated in Arkansas

100

### Emission Reductions Anticipated from the Proposed Project

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	.174	.695
Fine Particulate (PM2.5)	.007	.026
Hydrocarbons (HC)	.018	.07
Carbon Monoxide (CO)	.043	.171
Carbon Dioxide (CO2)	11.9	47.8
	Sum: 12.142	Sum: 48.762

### Describe the methodology used to calculate estimated emissions reductions from the proposed project.

We used the Diesel Emissions Quantifier from the EPA Website.

### Maximum Funding Assistance for this Replacement Bus

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

### Maximum Funding Assistance for Replacement of this Bus(\$)

375,000

## Project Details (7 of 8)

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

The existing bus is used daily (Monday through Friday) on a route, picking up students for school and delivering them home. It is also occasionally used for in town field trips and shuttles.

**Existing Bus Operation Frequency and Time of Use**

The existing bus is used 180 days out of the year (while school in session, Monday through Friday). It is used roughly 3 1/2 hours a day, but sometimes more.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Crawford

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABMCBA3NF051561

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

1992

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
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Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2BK18672	NA	Caterpillar	3116	1992	250	Ultra-Low Sulfur Diesel (ULSD)	608
							Sum: 608

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	4860
2021	4860
	Average: 4860

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

4

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

All-Electric

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	.174	.695
Fine Particulate (PM2.5)	.007	.026
Hydrocarbons (HC)	.018	.07
Carbon Monoxide (CO)	.043	.171



<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Carbon Dioxide (CO2)	11.9	47.8
	Sum: 12.142	Sum: 48.762

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

We used the Diesel Emissions Quantifier from the EPA Website.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

375,000

**Project Details (8 of 8)**

**Diesel-Powered School Bus; `EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

The existing bus is used daily (Monday through Friday) on a route, picking up students for school and delivering them home. It is also occasionally used for in town field trips and shuttles.

**Existing Bus Operation Frequency and Time of Use**

The existing bus is used 180 days out of the year (while school in session, Monday through Friday). It is used roughly 3 1/2 hours a day, but sometimes more.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Crawford

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABMCBA3NF051558

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

1992

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2BK18730	NA	Caterpillar	3116	1992	250	Ultra-Low Sulfur Diesel (ULSD)	495
							Sum: 495

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	3960
2021	3960
	Average: 3960

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

4

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

All-Electric

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Nitrogen Oxides (NOx)	.174	.695
Fine Particulate (PM2.5)	.007	.026
Hydrocarbons (HC)	.018	.07
Carbon Monoxide (CO)	.043	.171
Carbon Dioxide (CO2)	11.9	47.8
	Sum: 12.142	Sum: 48.762

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

We used the Diesel Emissions Quantifier from the EPA Website.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

375,000

**Project Benefits**

**Describe how this project will reduce environmental risks to economically-disadvantaged and other populations with disproportionately high and adverse human health or environmental impacts.**

There are many benefits to this project for the economically disadvantaged and to those with disproportionately high and adverse human health conditions.

--Zero tailpipe pollution -- students, drivers, and members of the community will be exposed to significantly less harmful diesel emissions like PM and NOX.

--Our particular buses that we will be replacing are 1992 models. They produce a considerable amount of more emissions than our newer models.

Electric buses would also greatly help the loading and unloading situation at schools. With no emissions, it will be healthier for students and duty teachers at these locations.

--Reduced greenhouse gas emissions compared to diesel school buses

This includes reduced idle time during pick up and drop off at schools where other vehicles are waiting for child pick up behind the buses. This time could exceed 15 minutes during the winter while buses remain at idle to keep bus internal temperature to code.

--Quiet, clean operation

With a quieter operation, noise pollution will be reduced, which will in turn reduce overall noise levels on the bus. For many in our special needs population, the excessive noise on a conventional school bus is difficult for them. With reduced noise levels, the students of this population will have a better ride.

**Describe how this project will reduce environmental risks to the public and sensitive populations.**

--Zero tailpipe pollution -- students, drivers, and members of the community will be exposed to significantly less harmful diesel emissions like PM and NOX.

--Our particular buses that we will be replacing are 1992 models. They produce a considerable amount of more emissions than our newer models.

Electric buses would also greatly help the loading and unloading situation at schools. With no emissions, it will be healthier for students and duty teachers at these locations.

-Reduced greenhouse gas emissions compared to diesel school buses

This includes reduced idle time during pick up and drop of at schools where other vehicles are waiting for child pick up behind the buses. This time could exceed 15 minutes during the winter while buses remain at idle to keep bus internal temperature to code.

--Quiet, clean operation

With a quieter operation, noise pollution will be reduced, which will in turn reduce overall noise levels on the bus. For many in our special needs population, the excessive noise on a conventional school bus is difficult for them. With reduced noise levels, the students of this population will have a better ride.

**Describe how the project will contribute to the widespread adoption of alternative fuels and advance the establishment of alternative fuel corridors.**

We currently serve as a leader within our region of the state in regard to other programs within the school transportation sector. I serve as a third party tester, so many districts look to us to test their drivers for CDL. We also serve as a regional driver training center, helping districts to comply with the new ELDT standards in driver training.

We are located within 30 yards of Interstate 40 in Alma, AR. The EV Buses would be lined up to their charging station with full visibility of this process from one of the main corridors through Arkansas.

**Describe any other benefits this project would produce for the community.**

We feel like this project would add many benefits to our community besides those mentioned above. First, we feel like the new buses can serve as an educational tool within our district. As students in various grades learn about alternative fuels and electrification of vehicles, they would have opportunities to ride and view those vehicles. Moreover, advanced students in the upper grades could have the opportunity to help with cost analyses of diesel versus electric.

Second, we feel like we could serve as a catalyst within our community to achieve a higher EV adoption rate. Once parents, and students, saw the efficiency of the buses, as well as their reliability, individual families would lean in favor of greater adoption within their homes and workplaces.

Third, as our district reaps the benefits of the EV buses, our district leaders will see the benefits and will be more ready to adopt the use of EV buses as we continue to phase out older buses.

Fourth, as the district realizes the savings of a diesel bus, other programs within the district would have greater funds available for use.

**Partnerships**

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Partnerships between the applicant and other organizations that advance deployment of alternative fuel stations or public charging infrastructure, or that fund additional vehicle replacements beyond those replaced under the ABC program are strongly encouraged. Partnerships that result in additional publicly available alternative fueling stations or publicly available DC fast chargers within two miles of a designated alternative-fuel corridor or in an underserved area are highly desirable. For the purposes of the ABC program, an underserved area is a location within the state where there are no existing alternative fuel or charging stations to support the replacement vehicles funded under the ABC program within fifty (50) miles of the project.

A full list of designated alternative fuel corridors are listed at [https://www.fhwa.dot.gov/environment/alternative\\_fuel\\_corridors/all\\_corridors/](https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/all_corridors/).

Existing alternative fueling stations and electric vehicle infrastructure can be identified using the United States Department of Energy's Alternative Fueling Station Locator: <https://afdc.energy.gov/stations/#/find/nearest>.

NOTE: No funding is available under this program for the construction of alternative fuel stations and the ABC program will only fund the applicable percentage of one depot charger per bus for projects that replace eligible diesel buses with all-electric buses.

**Describe any partnerships with other programs associated with this project, if applicable. Include contact information for a representative from any partner organizations.**

We are working closely with OGE to provide extra electric to the bus garage. OGE will be running three phase lines to our charging area at no cost to the district. Contact: Kris Halmes, 479-430-9447

We have not yet hired a contractor to lay the electric and install the charging stations. We plan to use Proterra systems for charging.

### **Infrastructure Availability**

Infrastructure.docx - 10/21/2022 03:25 PM

#### **Comment**

I had hoped to have a letter from OGE with their commitment and plans, but I have not yet received the written confirmation. They have told us, however, that 3 phase electric will be run to our bus garage at no cost to the district. They said it will take 3-4 months to complete from the time we put in the request.

## **Project Milestones**

**Identify each step necessary to complete the project and milestones for completing each step. Typical steps have been included as defaults. You can revise, add, or remove steps.**

<b>Project Step</b>	<b>Estimated Date (MM/DD/YY)</b>
New vehicles ordered	2/15/2023
New vehicles delivered	11/15/2023
Old vehicles scrapped	11/30/2023
NONE PROVIDED	12/1/2023
NONE PROVIDED	2/1/2023
NONE PROVIDED	2/20/2023
NONE PROVIDED	3/15/2023
NONE PROVIDED	7/12/2023
NONE PROVIDED	8/15/2023

**Describe your approach to achieving project milestones.**

Timeline for Completing Project

Official Award Notification--February 1, 2023

February 15, 2023--Order 8 buses

February 20-May 15, 2023—Run three phase to shop building—OGE will be providing at no cost to the district

March 15, 2023—Hire contractor to: run electric from new transformer box to charging stations; to install pads; to install charging stations—complete all projects by September

May 15, 2023—begin laying electric run from transformer to charging station locations

July 12, 2023—complete electric project

August 15, 2023—install charging stations

September 30, 2023—complete infrastructure work

November 15, 2023--New buses delivered

November 30, 2023--Old buses scrapped

December 1, 2023--Final Report and Reimbursement Request to DEQ

**Total Funding Assistance Requested Summary**

---

**Total Number of Vehicles**

8

**Maximum Funding Amount That Can Be Requested from DEQ (\$)**

3000000

**Funding Amount Requested from DEQ (\$)**

3000000

**Attachments**

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Date	Attachment Name	Context	User
10/21/2022 3:25 PM	Infrastructure.docx	Attachment	Jason Rutherford

**Internal Data**

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Label	Value
Completeness Check	
Application Complete	Yes
Application Selected for Funding by Selection Committee?	Select
MOA Executed	

Label	Value
Reimbursement Packet Received	
Payment Sent	

## Status History

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	User	Processing Status
8/17/2022 11:54:12 AM	Jason Rutherford	Draft
10/21/2022 3:29:00 PM	Jason Rutherford	Submitting
10/21/2022 3:29:17 PM	Jason Rutherford	Submitted
10/24/2022 1:47:29 PM	Mikayla Shaddon	Deemed Complete

## Audit

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Event	Event Description	Event By	Event Date
Submission Locked	Submission Locked	Mikayla Shaddon	10/24/2022 8:41 AM

## Processing Steps

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Step Name	Assigned To/Completed By	Date Completed
Form Submitted	Jason Rutherford	10/21/2022 3:29:17 PM
Ensure that all steps have been assigned to the appropriate staff member	Mikayla Shaddon	10/24/2022 8:40:46 AM
Set Submission Assigned Staff in Internal Controls	Mikayla Shaddon	10/24/2022 8:40:59 AM
Select Begin Review to Lock the Submission	Mikayla Shaddon	10/24/2022 8:41:06 AM
Application Completeness and Eligibility Review -If more information is needed or the project is ineligible, insert ineligible or incomplete work flow template between this step and the next step. If complete and eligible, proceed to the next step.	Mikayla Shaddon	10/24/2022 1:47:29 PM
Provide Application to Evaluation Committee	Mikayla Shaddon	



<b>Step Name</b>	<b>Assigned To/Completed By</b>	<b>Date Completed</b>
After reviewing all applications received, proceed with the next steps if this application is recommended for funding. Otherwise, delete remaining steps and insert "Not recommended" workflow.	Mikayla Shaddon	
Notification of Award Recommendation	Mikayla Shaddon	
Prepare MOA & Route via P&P form	Mikayla Shaddon	
Change the Submission Status to "Issued"	Mikayla Shaddon	

# Advanced Bus and Clean (ABC) Transportation Program

version 2.5

(Submission #: HPN-H0FX-739RV, version 2)

## Details

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<b>Submitted</b>	11/1/2022 (19 days ago) by Phillip Lloyd
<b>Applicant</b>	Jacksonville North Pulaski school District
<b>Submission ID</b>	HPN-H0FX-739RV
<b>Submission Assigned Staff</b>	Mikayla Shaddon
<b>Status</b>	Deemed Complete
<b>Active Steps</b>	Provide Application to Evaluation Committee

## Form Input

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### Applicant Information

**Applicant Organization Name**  
Jacksonville North Pulaski school District

**Type of Organization**  
School District

**Applicant Organization Mailing Address**  
2310 N REDMOND RD  
JACKSONVILLE, AR 72076

**Organizational DUNS number**  
080260704

**Congressional District**  
2nd

If you do not know your congressional district, you can find this information at <https://argis.ualr.edu/DistrictFinder/index.html>.

[Click here to be directed to the UALR District Finder](https://argis.ualr.edu/DistrictFinder/index.html)

## Project Manager Contact Information

<b>First Name</b>	<b>Last Name</b>	
Gary	Beck	
<b>Title</b>		
Director of Transportation		
<b>Phone Type</b>	<b>Number</b>	<b>Extension</b>
Business	501-241-2163	
<b>Email</b>		
Gbeck@jnpsd.org		
<b>Fax</b>		
NONE PROVIDED		

## Description of Applicant's Organization

### **Describe the work typically performed by the Applicant Organization**

JNPSD transports 3000 students 178 days a year. We have 145 trips using 40 buses; 6 of them are spares used when any bus goes down. We also use buses to transport students to various school-approved field trips. We have three mechanics on duty all year to service and maintain our fleet of buses and district cars.

### **Number of Persons Employed by the Applicant Organization**

60

### **Number of Years Applicant Organization Has Been in Existence in Arkansas**

12

### **Describe any Energy or Environmental Conservation Measures that the Applicant Organization Already Practices**

JNPSD has a policy where our buses will not idle for longer than 10 minutes per route. This policy ensures that we use less fuel and exhaust fumes are kept to a minimum. We also use Hydrotex HyFilm LEO EPD 5W-30, which exceeds the VW 504.00/507.00 specification and provides outstanding durability, cleanliness, wear protection, exhaust after-treatment, and system compatibility. Using HyFilm LEO EPD 5W-30 offers light-duty diesel engines with low SAPS1 for compatibility with diesel exhaust treatment systems, improved fuel economy, and extended drain intervals. Volkswagen (VW) 504.00/507.00 lubricants are considered the most technically advanced and highest-performing engine oils in the world today. We also have three new LPG buses in our fleet.

### **Describe any Past Performance in Successfully Completing and Managing Projects Similar in Size, Scope, and Relevance to the Proposed Project**

On a daily basis, we are adding and editing up to 5 to 8 scholars every day to our 188 routes. Our mechanics' service and maintain 40 buses and 22 district-owned cars, trucks, and vans. We log the mileage of every vehicle used in our fleet. In addition to our daily routes, we provide transportation for an average of 300 field trips per school year. These trips go all over Pulaski County and the state of Arkansas. With this in mind, we believe we can effectively manage a program of this size.

## Project Details (1 of 10)

### **Diesel-Powered School Bus; `EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

### **Existing Vehicle Details**

---

#### **Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

To transport as many as 3000 students to and from their homes, one of our seven schools in Pulaski County, and an average of 500 field trips per year, all within the State of Arkansas.

**Existing Bus Operation Frequency and Time of Use**

JNPSD uses our buses Monday- Friday on an average of 180 days per year. Routes are AM and PM, lasting about 6 hours per day. We also use them for field trips throughout the year. In the summer, we have around five buses running Monday- Friday AM and PM, lasting approximately 3 hours daily.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

4DRBUAAN37A506922

**Vehicle Make**

INTERNATIONAL

**Vehicle Model**

CE 300

**Vehicle Model Year**

2006

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
466HM2U2142076	6NVXH0466AEA	INTERNATIONAL	DT466	2006	210	Ultra-Low Sulfur Diesel (ULSD)	700
							Sum: 700

**PROCESSING ISSUE (CLOSED)**  
**Engine family name correction needed**

The engine family name can be found on the engine tag and should contain approximately 12 characters. Please verify the engine family name.  
 Created on 10/27/2022 1:09 PM by **Mikayla Shaddon**

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	7500
2021	6500
	Average: 7000

**Number of days operated per week (on average) in 2020 and 2021**

3

**Remaining Life (Years)**

3

**New Vehicle Details**

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	92.6	926
Fine Particulate (PM2.5)	97.4	974
Hydrocarbons (HC)	95.1	951
Carbon Monoxide (CO)	-27.1	-271
Carbon Dioxide (CO2)	0	0
	Sum: 258	Sum: 2580

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

We utilized the formulae provided at <https://cfpub.epa.gov/quantifier/index.cfm?action=fleet.view> using the following information in the group, which yielded the results for the percentage of emissions reduced:

Type: Onroad

Target Fleet: School Bus

Quantity: 1

Baseline Engine Model Year: 2006

Baseline Fuel Type: ULSD (diesel)

Annual Fuel Gallons: 1360

Diesel-equivalent Gallons: 1360

Annual Miles Traveled: 14084

Annual Idling Hours: 107

Upgrade Year: 2024

Remaining Life of Baseline Engine/Vehicle: 3

In the Upgrade

Type: Vehicle Replacement

Upgrade: Replace – LPG/Propane

New Engine Model Year 2024

New Annual Fuel Volume (per engine) 2092

New Diesel-equivalent Gallons 1360

Upgrade Cost Per Unit \$ 12,000

Labor Cost Per Unit \$ 0.0

Percent of Emissions Reduced

NOx 92.6

PM2.5 97.4

HC 95.1

CO -27.1

CO2 0

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.



PROCESSING ISSUE (CLOSED)

**Engine family name correction**

The engine family name can be found on the engine tag and should contain approximately 12 characters. Please verify the engine family name.

Created on 10/27/2022 1:09 PM by **Mikayla Shaddon**

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	8000
2021	6500
	Average: 7250

**Number of days operated per week (on average) in 2020 and 2021**

4

**Remaining Life (Years)**

3

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	85.2	852
Fine Particulate (PM2.5)	22.4	224
Hydrocarbons (HC)	81.8	818
Carbon Monoxide (CO)	-335.5	-3355
Carbon Dioxide (CO2)	0	0
	Sum: -146.1	Sum: -1461

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

We utilized the formulae provided at <https://cfpub.epa.gov/quantifier/index.cfm?action=fleet.view> using the following information in the group, which yielded the results for the percentage of emissions reduced:

Type: Onroad  
Target Fleet: School Bus  
Quantity: 1  
Baseline Engine Model Year: 2007  
Baseline Fuel Type: ULSD (diesel)  
Annual Fuel Gallons: 1360  
Diesel-equivalent Gallons: 1360  
Annual Miles Traveled: 14084  
Annual Idling Hours: 107  
Upgrade Year: 2024  
Remaining Life of Baseline Engine/Vehicle: 3  
In the Upgrade  
Type: Vehicle Replacement  
Upgrade: Replace – LPG/Propane  
New Engine Model Year 2024  
New Annual Fuel Volume (per engine) 2092  
New Diesel-equivalent Gallons 1360  
Upgrade Cost Per Unit \$ 12,000  
Labor Cost Per Unit \$ 0.0  
Percent of Emissions Reduced  
NOx 85.2  
PM2.5 22.4  
HC 81.8  
CO -335.5  
CO2 0

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (3 of 10)**

**Diesel-Powered School Bus; `EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

To transport as many as 3000 students to and from their homes, one of our seven schools in Pulaski County, and an average of 500 field trips per year, all within the State of Arkansas.



**Existing Bus Operation Frequency and Time of Use**

JNPSD uses our buses Monday- Friday on an average of 180 days per year. Routes are AM and PM, lasting about 6 hours per day. We also use them for field trips throughout the year. In the summer, we have around five buses running Monday- Friday AM and PM, lasting approximately 3 hours daily.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 6: 19,501 – 26,000 lbs.

**Vehicle Identification Number**

1BAKBCPA58F252820

**Vehicle Make**

BLUE BIRD

**Vehicle Model**

VISION

**Vehicle Model Year**

2008

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46741858	8CEXHO408BAF	CUMMINS	ISB 200	2008	200	Ultra-Low Sulfur Diesel (ULSD)	700
							Sum: 700

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	7500
2021	6500
	Average: 7000

**Number of days operated per week (on average) in 2020 and 2021**

3

**Remaining Life (Years)**

3

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	85.2	852
Fine Particulate (PM2.5)	22.4	224
Hydrocarbons (HC)	81.8	818
Carbon Monoxide (CO)	-335.5	-3355
Carbon Dioxide (CO2)	0	0
	Sum: -146.1	Sum: -1461

### Describe the methodology used to calculate estimated emissions reductions from the proposed project.

We utilized the formulae provided at <https://cfpub.epa.gov/quantifier/index.cfm?action=fleet.view> using the following information in the group, which yielded the results for the percentage of emissions reduced:

Type: Onroad

Target Fleet: School Bus

Quantity: 1

Baseline Engine Model Year: 2008

Baseline Fuel Type: ULSD (diesel)

Annual Fuel Gallons: 1360

Diesel-equivalent Gallons: 1360

Annual Miles Traveled: 14084

Annual Idling Hours: 107

Upgrade Year: 2024

Remaining Life of Baseline Engine/Vehicle: 3

In the Upgrade

Type: Vehicle Replacement

Upgrade: Replace – LPG/Propane

New Engine Model Year 2024

New Annual Fuel Volume (per engine) 2092

New Diesel-equivalent Gallons 1360

Upgrade Cost Per Unit \$ 12,000

Labor Cost Per Unit \$ 0.0

Percent of Emissions Reduced

NOx 85.2

PM2.5 22.4

HC 81.8

CO -335.5

CO2 0

### Maximum Funding Assistance for this Replacement Bus

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

### Maximum Funding Assistance for Replacement of this Bus(\$)

98,000

### Project Details (4 of 10)

#### Diesel-Powered School Bus; `EngineModelYear`

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

To transport as many as 3000 students to and from their homes, one of our seven schools in Pulaski County, and an average of 500 field trips per year, all within the State of Arkansas.

**Existing Bus Operation Frequency and Time of Use**

JNPSD uses our buses Monday- Friday on an average of 180 days per year. Routes are AM and PM, lasting about 6 hours per day. We also use them for field trips throughout the year. In the summer, we have around five buses running Monday- Friday AM and PM, lasting approximately 3 hours daily.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BAKF CPA79F262271

**Vehicle Make**

BLUE BIRD

**Vehicle Model**

VISION

**Vehicle Model Year**

2008

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46910095	8CEXHO408BAF	CUMMINS	ISB 200	2008	200	Ultra-Low Sulfur Diesel (ULSD)	700
							Sum: 700

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	8000
2021	6000
	Average: 7000

**Number of days operated per week (on average) in 2020 and 2021**

3

**Remaining Life (Years)**

3

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

## Percentage of Time the Affected Equipment will be Operated in Arkansas

100

### Emission Reductions Anticipated from the Proposed Project

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	85.2	852
Fine Particulate (PM2.5)	22.4	224
Hydrocarbons (HC)	81.8	818
Carbon Monoxide (CO)	-335.5	-3355
Carbon Dioxide (CO2)	0	0
	Sum: -146.1	Sum: -1461

### Describe the methodology used to calculate estimated emissions reductions from the proposed project.

We utilized the formulae provided at <https://cfpub.epa.gov/quantifier/index.cfm?action=fleet.view> using the following information in the group, which yielded the results for the percentage of emissions reduced:

Type: Onroad

Target Fleet: School Bus

Quantity: 1

Baseline Engine Model Year: 2008

Baseline Fuel Type: ULSD (diesel)

Annual Fuel Gallons: 1360

Diesel-equivalent Gallons: 1360

Annual Miles Traveled: 14084

Annual Idling Hours: 107

Upgrade Year: 2024

Remaining Life of Baseline Engine/Vehicle: 3

In the Upgrade

Type: Vehicle Replacement

Upgrade: Replace – LPG/Propane

New Engine Model Year 2024

New Annual Fuel Volume (per engine) 2092

New Diesel-equivalent Gallons 1360

Upgrade Cost Per Unit \$ 12,000

Labor Cost Per Unit \$ 0.0

Percent of Emissions Reduced

NOx 85.2

PM2.5 22.4

HC 81.8

CO -335.5

CO2 0

### Maximum Funding Assistance for this Replacement Bus

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

### Maximum Funding Assistance for Replacement of this Bus(\$)

98,000



PROCESSING ISSUE (CLOSED)

**Engine family name correction**

The engine family name can be found on the engine tag and should contain approximately 12 characters. Please verify the engine family name.

Created on 10/27/2022 1:10 PM by **Mikayla Shaddon**

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	9000
2021	6000
	Average: 7500

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

3

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	92.6	926
Fine Particulate (PM2.5)	97.4	974
Hydrocarbons (HC)	95.1	951
Carbon Monoxide (CO)	-27.1	-271
Carbon Dioxide (CO2)	0	0
	Sum: 258	Sum: 2580

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

We utilized the formulae provided at <https://cfpub.epa.gov/quantifier/index.cfm?action=fleet.view> using the following information in the group, which yielded the results for the percentage of emissions reduced:

Type: Onroad  
Target Fleet: School Bus  
Quantity: 1  
Baseline Engine Model Year: 2006  
Baseline Fuel Type: ULSD (diesel)  
Annual Fuel Gallons: 1360  
Diesel-equivalent Gallons: 1360  
Annual Miles Traveled: 14084  
Annual Idling Hours: 107  
Upgrade Year: 2024  
Remaining Life of Baseline Engine/Vehicle: 3  
In the Upgrade  
Type: Vehicle Replacement  
Upgrade: Replace – LPG/Propane  
New Engine Model Year 2024  
New Annual Fuel Volume (per engine) 2092  
New Diesel-equivalent Gallons 1360  
Upgrade Cost Per Unit \$ 12,000  
Labor Cost Per Unit \$ 0.0  
Percent of Emissions Reduced  
NOx 92.6  
PM2.5 97.4  
HC 95.1  
CO -27.1  
CO2 0

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (6 of 10)**

**Diesel-Powered School Bus; `EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

To transport as many as 3000 students to and from their homes, one of our seven schools in Pulaski County, and an average of 500 field trips per year, all within the State of Arkansas.

**Existing Bus Operation Frequency and Time of Use**

JNPSD uses our buses Monday- Friday on an average of 180 days per year. Routes are AM and PM, lasting about 6 hours per day. We also use them for field trips throughout the year. In the summer, we have around five buses running Monday- Friday AM and PM, lasting approximately 3 hours daily.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

4DRBUAAN37A506936

**Vehicle Make**

INTERNATIONAL

**Vehicle Model**

CE 300

**Vehicle Model Year**

2006

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
466HM2U2142093	6NVXH0466AEA	INTERNATIONAL	DT466	2006	210	Ultra-Low Sulfur Diesel (ULSD)	700
							Sum: 700

**PROCESSING ISSUE (CLOSED)**  
**Engine family name correction**  
 The engine family name can be found on the engine tag and should contain approximately 12 characters. Please verify the engine family name.  
 Created on 10/27/2022 1:11 PM by **Mikayla Shaddon**

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	7000
2021	7000
	Average: 7000

**Number of days operated per week (on average) in 2020 and 2021**

4

**Remaining Life (Years)**

3

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG



## Percentage of Time the Affected Equipment will be Operated in Arkansas

100

### Emission Reductions Anticipated from the Proposed Project

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

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### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	92.6	926
Fine Particulate (PM2.5)	97.4	974
Hydrocarbons (HC)	95.1	951
Carbon Monoxide (CO)	-27.1	-271
Carbon Dioxide (CO2)	0	0
	Sum: 258	Sum: 2580

### Describe the methodology used to calculate estimated emissions reductions from the proposed project.

We utilized the formulae provided at <https://cfpub.epa.gov/quantifier/index.cfm?action=fleet.view> using the following information in the group, which yielded the results for the percentage of emissions reduced:

Type: Onroad

Target Fleet: School Bus

Quantity: 1

Baseline Engine Model Year: 2006

Baseline Fuel Type: ULSD (diesel)

Annual Fuel Gallons: 1360

Diesel-equivalent Gallons: 1360

Annual Miles Traveled: 14084

Annual Idling Hours: 107

Upgrade Year: 2024

Remaining Life of Baseline Engine/Vehicle: 3

In the Upgrade

Type: Vehicle Replacement

Upgrade: Replace – LPG/Propane

New Engine Model Year 2024

New Annual Fuel Volume (per engine) 2092

New Diesel-equivalent Gallons 1360

Upgrade Cost Per Unit \$ 12,000

Labor Cost Per Unit \$ 0.0

Percent of Emissions Reduced

NOx 92.6

PM2.5 97.4

HC 95.1

CO -27.1

CO2 0

### Maximum Funding Assistance for this Replacement Bus

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

### Maximum Funding Assistance for Replacement of this Bus(\$)

98,000



PROCESSING ISSUE (CLOSED)

**Engine family name correction**

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Created on 10/27/2022 1:11 PM by **Mikayla Shaddon**

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	8000
2021	6000
	Average: 7000

**Number of days operated per week (on average) in 2020 and 2021**

4

**Remaining Life (Years)**

3

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

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Carbon Dioxide (CO2)	0	0
	Sum: 258	Sum: 2580

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Target Fleet: School Bus  
Quantity: 1  
Baseline Engine Model Year: 2006  
Baseline Fuel Type: ULSD (diesel)  
Annual Fuel Gallons: 1360  
Diesel-equivalent Gallons: 1360  
Annual Miles Traveled: 14084  
Annual Idling Hours: 107  
Upgrade Year: 2024  
Remaining Life of Baseline Engine/Vehicle: 3  
In the Upgrade  
Type: Vehicle Replacement  
Upgrade: Replace – LPG/Propane  
New Engine Model Year 2024  
New Annual Fuel Volume (per engine) 2092  
New Diesel-equivalent Gallons 1360  
Upgrade Cost Per Unit \$ 12,000  
Labor Cost Per Unit \$ 0.0  
Percent of Emissions Reduced  
NOx 92.6  
PM2.5 97.4  
HC 95.1  
CO -27.1  
CO2 0

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (8 of 10)**

**Diesel-Powered School Bus; `EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

To transport as many as 3000 students to and from their homes, one of our seven schools in Pulaski County, and an average of 500 field trips per year, all within the State of Arkansas.

**Existing Bus Operation Frequency and Time of Use**

JNPSD uses our buses Monday- Friday on an average of 180 days per year. Routes are AM and PM, lasting about 6 hours per day. We also use them for field trips throughout the year. In the summer, we have around five buses running Monday- Friday AM and PM, lasting approximately 3 hours daily.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

4DRBUAAN08A501596

**Vehicle Make**

INTERNATIONAL

**Vehicle Model**

CE 300

**Vehicle Model Year**

2006

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
466HM2U2149102	6NVXH0466AEA	INTERNATIONAL	DT466	2006	210	Ultra-Low Sulfur Diesel (ULSD)	900
							Sum: 900

**PROCESSING ISSUE (CLOSED)**  
**Engine family name correction**  
 The engine family name can be found on the engine tag and should contain approximately 12 characters. Please verify the engine family name.  
 Created on 10/27/2022 1:11 PM by **Mikayla Shaddon**

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	9000
2021	9000
	Average: 9000

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

3

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

## Percentage of Time the Affected Equipment will be Operated in Arkansas

100

### Emission Reductions Anticipated from the Proposed Project

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

#### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	92.6	926
Fine Particulate (PM2.5)	97.4	974
Hydrocarbons (HC)	95.1	951
Carbon Monoxide (CO)	-27.1	-271
Carbon Dioxide (CO2)	0	0
	Sum: 258	Sum: 2580

#### Describe the methodology used to calculate estimated emissions reductions from the proposed project.

We utilized the formulae provided at <https://cfpub.epa.gov/quantifier/index.cfm?action=fleet.view> using the following information in the group, which yielded the results for the percentage of emissions reduced:

Type: Onroad

Target Fleet: School Bus

Quantity: 1

Baseline Engine Model Year: 2006

Baseline Fuel Type: ULSD (diesel)

Annual Fuel Gallons: 1360

Diesel-equivalent Gallons: 1360

Annual Miles Traveled: 14084

Annual Idling Hours: 107

Upgrade Year: 2024

Remaining Life of Baseline Engine/Vehicle: 3

In the Upgrade

Type: Vehicle Replacement

Upgrade: Replace – LPG/Propane

New Engine Model Year 2024

New Annual Fuel Volume (per engine) 2092

New Diesel-equivalent Gallons 1360

Upgrade Cost Per Unit \$ 12,000

Labor Cost Per Unit \$ 0.0

Percent of Emissions Reduced

NOx 92.6

PM2.5 97.4

HC 95.1

CO -27.1

CO2 0

#### Maximum Funding Assistance for this Replacement Bus

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

#### Maximum Funding Assistance for Replacement of this Bus(\$)

98,000



PROCESSING ISSUE (CLOSED)

**Engine family name correction**

The engine family name can be found on the engine tag and should contain approximately 12 characters. Please verify the engine family name.

Created on 10/27/2022 1:12 PM by **Mikayla Shaddon**

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	8000
2021	6000
	Average: 7000

**Number of days operated per week (on average) in 2020 and 2021**

4

**Remaining Life (Years)**

3

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	92.6	926
Fine Particulate (PM2.5)	97.4	974
Hydrocarbons (HC)	95.1	951
Carbon Monoxide (CO)	-27.1	-271
Carbon Dioxide (CO2)	0	0
	Sum: 258	Sum: 2580



**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

We utilized the formulae provided at <https://cfpub.epa.gov/quantifier/index.cfm?action=fleet.view> using the following information in the group, which yielded the results for the percentage of emissions reduced:

Type: Onroad  
Target Fleet: School Bus  
Quantity: 1  
Baseline Engine Model Year: 2006  
Baseline Fuel Type: ULSD (diesel)  
Annual Fuel Gallons: 1360  
Diesel-equivalent Gallons: 1360  
Annual Miles Traveled: 14084  
Annual Idling Hours: 107  
Upgrade Year: 2024  
Remaining Life of Baseline Engine/Vehicle: 3  
In the Upgrade  
Type: Vehicle Replacement  
Upgrade: Replace – LPG/Propane  
New Engine Model Year 2024  
New Annual Fuel Volume (per engine) 2092  
New Diesel-equivalent Gallons 1360  
Upgrade Cost Per Unit \$ 12,000  
Labor Cost Per Unit \$ 0.0  
Percent of Emissions Reduced  
NOx 92.6  
PM2.5 97.4  
HC 95.1  
CO -27.1  
CO2 0

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

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**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (10 of 10)**

**Diesel-Powered School Bus; `EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

To transport as many as 3000 students to and from their homes, one of our seven schools in Pulaski County, and an average of 500 field trips per year, all within the State of Arkansas.

**Existing Bus Operation Frequency and Time of Use**

JNPSD uses our buses Monday- Friday on an average of 180 days per year. Routes are AM and PM, lasting about 6 hours per day. We also use them for field trips throughout the year. In the summer, we have around five buses running Monday- Friday AM and PM, lasting approximately 3 hours daily.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

4DRBUAANO7A506926

**Vehicle Make**

INTERNATIONAL

**Vehicle Model**

CE 300

**Vehicle Model Year**

2006

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
466HM2U2142066	6NVXH0466AEA	INTERNATIONAL	DT466	2006	210	Ultra-Low Sulfur Diesel (ULSD)	700
							Sum: 700

**PROCESSING ISSUE (CLOSED)**  
**Engine family name correction**  
 The engine family name can be found on the engine tag and should contain approximately 12 characters. Please verify the engine family name.  
 Created on 10/27/2022 1:12 PM by Mikayla Shaddon

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	7000
2021	7000
	Average: 7000

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

3

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

## Percentage of Time the Affected Equipment will be Operated in Arkansas

100

### Emission Reductions Anticipated from the Proposed Project

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

#### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	92.6	926
Fine Particulate (PM2.5)	97.4	974
Hydrocarbons (HC)	95.1	951
Carbon Monoxide (CO)	-27.1	-271
Carbon Dioxide (CO2)	0	0
	Sum: 258	Sum: 2580

#### Describe the methodology used to calculate estimated emissions reductions from the proposed project.

We utilized the formulae provided at <https://cfpub.epa.gov/quantifier/index.cfm?action=fleet.view> using the following information in the group, which yielded the results for the percentage of emissions reduced:

Type: Onroad

Target Fleet: School Bus

Quantity: 1

Baseline Engine Model Year: 2006

Baseline Fuel Type: ULSD (diesel)

Annual Fuel Gallons: 1360

Diesel-equivalent Gallons: 1360

Annual Miles Traveled: 14084

Annual Idling Hours: 107

Upgrade Year: 2024

Remaining Life of Baseline Engine/Vehicle: 3

In the Upgrade

Type: Vehicle Replacement

Upgrade: Replace – LPG/Propane

New Engine Model Year 2024

New Annual Fuel Volume (per engine) 2092

New Diesel-equivalent Gallons 1360

Upgrade Cost Per Unit \$ 12,000

Labor Cost Per Unit \$ 0.0

Percent of Emissions Reduced

NOx 92.6

PM2.5 97.4

HC 95.1

CO -27.1

CO2 0

#### Maximum Funding Assistance for this Replacement Bus

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

#### Maximum Funding Assistance for Replacement of this Bus(\$)

98,000

## **Project Benefits**

### **Describe how this project will reduce environmental risks to economically-disadvantaged and other populations with disproportionately high and adverse human health or environmental impacts.**

According to the EPA, greenhouse gases, which include carbon dioxide, methane, nitrous oxide, and fluorinated gases, are gases that trap heat in the atmosphere. While each contributes to climate change, emissions like nitrogen oxides (NOx), carbon monoxide, and particulate matter (PM) also pose a significant risk to human health and air quality. One of the most effective ways to reduce these harmful emissions is to transition school bus fleets to cleaner, safer fuel sources. NOx are highly reactive gases that the U.S. federal government regulates due to their harm to health and the environment. They trigger long-term health problems, such as asthma, bronchitis, and other respiratory issues, especially in children's developing lungs. Over the years, the EPA has set stricter emissions standards on NOx to limit its exposure. The primary source of NOx is motor vehicles.

According to a University of California Riverside study, diesel-fueled medium- and heavy-duty vehicles, including school buses, are the No. 1 source of NOx emissions in almost every single metropolitan region in the U.S. and research proves propane school buses, which are substantially lower in NOx than conventional fuels, are safer for the children riding in them and the communities in which they drive.

According to a West Virginia University study released in 2020, propane school buses reduce NOx by at least 95% compared with clean diesel. By lowering this toxic chemical, students may perform better inside the classroom.

### **Describe how this project will reduce environmental risks to the public and sensitive populations.**

With propane autogas buses, students aren't exposed to the emissions from older diesel buses that can aggravate asthma and cause other health issues. The EPA also regulates PM, which creates severe lung and bronchial health problems. PM is the soot you see from vehicle exhaust, which is known to aggravate asthma and is identified as a carcinogen by the World Health Organization. Propane and modern diesel fuels virtually eliminate particulate matter. The significant difference is that, unlike modern diesel, propane eliminates it without adding maintenance burdens and extra costs to the end user. The public's exposure to particulate matter is greatly lessened or eliminated when using propane to fuel school buses. A recent Georgia State University study found diesel school bus fumes drove down test scores. The study correlated increased academic performance when children were exposed to lower levels of school bus emissions.

### **Describe how the project will contribute to the widespread adoption of alternative fuels and advance the establishment of alternative fuel corridors.**

We plan to be one of the first school districts in Pulaski County to use propane, with plans to replace our fleet of 50 school buses with propane. With a filling station on our lot, we would be able to allow any school district that is or will be using propane to have a location to refuel their bus in northeast Pulaski County. We also hope to show other communities in Arkansas the benefits of changing to propane.

### **Describe any other benefits this project would produce for the community.**

School buses fueled by propane autogas provide a reliable, clean, and affordable alternative to diesel. In a growing number of school bus fleets across the nation, school systems are choosing school buses fueled by propane autogas.

Utilizing propane autogas-fueled buses will reduce or eliminate diesel exhaust to better comply with Environmental Protection Agency ("EPA") regulations issued in 2004 and 2010 that require significant reductions in hydrocarbon, nitrogen oxide, and particulate matter emissions from heavy-duty diesel engines.

Also, the 1990 Clean Air Act designated propane as an approved Alternative Fuel. Lowering operating costs decreases emissions, and provides the most extended range of alternative fuels.

The EPA also regulates particulate matter ("PM") that creates severe lung and bronchial health problems. PM is the soot you see from vehicle exhaust, which aggravates asthma and is identified as a carcinogen by the World Health Organization.

Propane and modern diesel fuels virtually eliminate particulate matter. The significant difference is that, unlike modern diesel, propane eliminates it without adding maintenance burdens and extra costs to the end user. The public's exposure to particulate matter is greatly lessened or eliminated when using propane to fuel school buses.

## **Partnerships**

Partnerships between the applicant and other organizations that advance deployment of alternative fuel stations or public charging infrastructure, or that fund additional vehicle replacements beyond those replaced under the ABC program are strongly encouraged. Partnerships that result in additional publicly available alternative fueling stations or publicly available DC fast chargers within two miles of a designated alternative-fuel corridor or in an underserved area are highly desirable. For the purposes of the ABC program, an underserved area is a location within the state where there are no existing alternative fuel or charging stations to support the replacement vehicles funded under the ABC program within fifty (50) miles of the project.

A full list of designated alternative fuel corridors are listed at [https://www.fhwa.dot.gov/environment/alternative\\_fuel\\_corridors/all\\_corridors/](https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/all_corridors/).

Existing alternative fueling stations and electric vehicle infrastructure can be identified using the United States Department of Energy's Alternative Fueling Station Locator: <https://afdc.energy.gov/stations/#/find/nearest>.

NOTE: No funding is available under this program for the construction of alternative fuel stations and the ABC program will only fund the applicable percentage of one depot charger per bus for projects that replace eligible diesel buses with all-electric buses.

**Describe any partnerships with other programs associated with this project, if applicable. Include contact information for a representative from any partner organizations.**

NA

#### Infrastructure Availability

[LPGtank.pdf - 10/25/2022 10:43 AM](#)

##### Comment

LPG pumping station in place.

### Project Milestones

Identify each step necessary to complete the project and milestones for completing each step. Typical steps have been included as defaults. You can revise, add, or remove steps.

Project Step	Estimated Date (MM/DD/YY)
Solicit bids in newspaper of statewide circulation	11/30/2022
Bid(s) awarded	1/6/2023
New vehicles ordered	2/28/2023
New vehicles delivered	9/30/2023
Old vehicles scrapped	10/27/2023
Final report and reimbursement request sent to DEQ	12/8/2023

#### Describe your approach to achieving project milestones.

We plan to have all the dates of the milestones in our transportation calendar with a 15-day reminder and a 5-day reminder before the posted deadline. Mr. Beck (Director of transportation) will manage all aspects of this plan. All transportation employees involved will receive email notifications of any deadlines for the milestones. We have received approval from our assistant superintendent to make an application for this program. Once the bid process is published, the bid will be awarded in 30 days. Upon awarding the bid, the bus will be ordered. At the end of the school year, our mechanics drill holes in the block and head of the replaced bus. The bus frame will be cut, and photographs will be taken for proof. The bus will then be towed away by the scrapyard at no charge.

### Total Funding Assistance Requested Summary

#### Total Number of Vehicles

10

#### Maximum Funding Amount That Can Be Requested from DEQ (\$)

980000

#### Funding Amount Requested from DEQ (\$)

980000

### Attachments

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Date	Attachment Name	Context	User
10/25/2022 10:43 AM	LPGtank.pdf	Attachment	Phillip Lloyd

## Internal Data

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Label	Value
Completeness Check	
Application Complete	Yes
Application Selected for Funding by Selection Committee?	Select
MOA Executed	
Reimbursement Packet Received	
Payment Sent	

## Status History

---

	User	Processing Status
10/31/2022 3:52:00 PM	Phillip Lloyd	Draft
11/1/2022 10:50:17 AM	Phillip Lloyd	Submitting
11/1/2022 10:50:32 AM	Phillip Lloyd	Submitted
11/1/2022 10:54:05 AM	Mikayla Shaddon	Deemed Complete

## Audit

---

Event	Event Description	Event By	Event Date
Submission Locked	Submission Locked	Mikayla Shaddon	10/27/2022 12:51 PM
Submission Unlocked	Submission Unlocked	Mikayla Shaddon	10/27/2022 1:14 PM
Submission Locked	Submission Locked	Mikayla Shaddon	11/1/2022 10:52 AM

## Processing Steps

---

Step Name	Assigned To/Completed By	Date Completed
Form Submitted	Phillip Lloyd	11/1/2022 10:50:32 AM
Ensure that all steps have been assigned to the appropriate staff member	Mikayla Shaddon	10/27/2022 12:51:17 PM
Set Submission Assigned Staff in Internal Controls	Mikayla Shaddon	10/27/2022 12:51:19 PM
Select Begin Review to Lock the Submission	Mikayla Shaddon	10/27/2022 12:51:26 PM
Application Completeness and Eligibility Review -If more information is needed or the project is ineligible, insert ineligible or incomplete work flow template between this step and the next step. If complete and eligible, proceed to the next step.	Mikayla Shaddon	11/1/2022 10:54:05 AM
Provide Application to Evaluation Committee	Mikayla Shaddon	

Step Name	Assigned To/Completed By	Date Completed
After reviewing all applications received, proceed with the next steps if this application is recommended for funding. Otherwise, delete remaining steps and insert "Not recommended" workflow.	Mikayla Shaddon	
Notification of Award Recommendation	Mikayla Shaddon	
Prepare MOA & Route via P&P form	Mikayla Shaddon	
Change the Submission Status to "Issued"	Mikayla Shaddon	

## Revisions

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Revision	Revision Date	Revision By
Revision 1	10/18/2022 7:26 AM	Phillip Lloyd
Revision 2	10/31/2022 3:52 PM	Phillip Lloyd

# Advanced Bus and Clean (ABC) Transportation Program

version 2.4

(Submission #: HPM-4CZV-G7ADP, version 1)

## Details

---

**Submitted** 10/28/2022 (23 days ago) by Chris Knight

**Applicant** Mountain Home School District

**Submission ID** HPM-4CZV-G7ADP

**Submission Assigned Staff** Mikayla Shaddon

**Status** Submitted

**Active Steps** Application Completeness and Eligibility Review -If more information is needed or the project is ineligible, insert ineligible or incomplete work flow template between this step and the next step. If complete and eligible, proceed to the next step.

## Form Input

---

### Applicant Information

**Applicant Organization Name**  
Mountain Home School District

**Type of Organization**  
School District

**Applicant Organization Mailing Address**  
1439 S COLLEGE ST  
MOUNTAIN HOME, AR 72653

**Organizational DUNS number**  
075648634



## Congressional District

1st

If you do not know your congressional district, you can find this information at <https://argis.ualr.edu/DistrictFinder/index.html>.

[Click here to be directed to the UALR District Finder](#)

### Project Manager Contact Information

<b>First Name</b>	<b>Last Name</b>	
Chris	<i>Knight</i>	
<b>Title</b>		
<i>Director of Operations</i>		
<b>Phone Type</b>	<b>Number</b>	<b>Extension</b>
Business	8704251255	
<b>Email</b>		
cknight@mhbombers.com		
<b>Fax</b>		
NONE PROVIDED		

### Description of Applicant's Organization

#### Describe the work typically performed by the Applicant Organization

School District

#### Number of Persons Employed by the Applicant Organization

500

#### Number of Years Applicant Organization Has Been in Existence in Arkansas

65

#### Describe any Energy or Environmental Conservation Measures that the Applicant Organization Already Practices

We have installed centrally managed thermostats and led lighting in the entire district.

#### Describe any Past Performance in Successfully Completing and Managing Projects Similar in Size, Scope, and Relevance to the Proposed Project

We purchase and dispose of buses every year.

### Project Details (1 of 5)

Diesel-Powered School Bus;`EngineModelYear`



**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	4500
2021	4500
	Average: 4500

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

5

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

All-Electric

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	.054	.269
Fine Particulate (PM2.5)	.004	.018
Hydrocarbons (HC)	.011	.054
Carbon Monoxide (CO)	.021	.122
Carbon Dioxide (CO2)	9.2	46.1
	Sum: 9.29	Sum: 46.563

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

I used the provided EPA Diesel Emissions Quantifier

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

375,000

**Project Details (2 of 5)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

The existing bus is a 2007 71 seat Diesel-Powered bus, currently being used for a normal morning and afternoon bus route with a max of 70 miles.

**Existing Bus Operation Frequency and Time of Use**

This bus is currently being used for a normal morning and afternoon bus route with a max of 70 miles. Average annual mileage is around 4,000 with an annual diesel consumption of 650 gallons.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Baxter

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

4UZAAXDC77CX00519

**Vehicle Make**

Thomas

**Vehicle Model**

FS 65 Chassis

**Vehicle Model Year**

2001

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
cx00519	NA	3176 Cats	10.3 liter	2007	190	Ultra-Low Sulfur Diesel (ULSD)	650
							Sum: 650

**CORRECTION REQUEST (CREATED)****Please verify engine model year and engine family name.**

Please verify engine model year and engine family name. The vehicle is described as an earlier year than the engine model. If the engine was produced in 2007, an engine family name should be present on the engine tag and should consist of 12 characters. Please update/explain as needed.

Created on 10/31/2022 7:51 AM by **Mikayla Shaddon**

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	4000
2021	4000
	Average: 4000

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

5

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

All-Electric

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Nitrogen Oxides (NOx)	.054	.269
Fine Particulate (PM2.5)	.004	.018
Hydrocarbons (HC)	.011	.054
Carbon Monoxide (CO)	.021	.122
Carbon Dioxide (CO2)	9.2	46.1
	Sum: 9.29	Sum: 46.563

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

I used the provided EPA Diesel Emissions Quantifier

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

375,000

**Project Details (3 of 5)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

### Existing Vehicle Details

---

#### Existing Vehicle Type

Diesel-Powered School Bus

#### Typical Function of Existing Bus Involved in the Proposed Project

The existing bus is a 2007 71 seat Diesel-Powered bus, currently being used for a normal morning and afternoon bus route with a max of 70 miles.

#### Existing Bus Operation Frequency and Time of Use

This bus is currently being used for a normal morning and afternoon bus route with a max of 70 miles. Average annual mileage is around 4,000 with an annual diesel consumption of 650 gallons.

#### In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?

Baxter

#### On-Highway Weight Class

Class 7: 26,001 – 33,000 lbs.

#### Vehicle Identification Number

4UZAAXDC57CX00518

#### Vehicle Make

Thomas

#### Vehicle Model

FS 65 Chassis

#### Vehicle Model Year

2001

#### Highway Engine Information (Complete one row for each engine that powers the existing vehicle)

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
CX00518	NA	3176 Cat	10.3 liter	2007	190	Ultra-Low Sulfur Diesel (ULSD)	650

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
							Sum: 650

**CORRECTION REQUEST (CREATED)**

**Please verify engine model year and engine family name.**

Please verify engine model year and engine family name. The vehicle is described as an earlier year than the engine model. If the engine was produced in 2007, an engine family name should be present on the engine tag and should consist of 12 characters. Please update/explain as needed.

Created on 10/31/2022 7:52 AM by **Mikayla Shaddon**

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	4000
2021	4000
	Average: 4000

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

5

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

All-Electric

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website. [Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
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---



<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Nitrogen Oxides (NOx)	.054	.269
Fine Particulate (PM2.5)	.004	.018
Hydrocarbons (HC)	.011	.054
Carbon Monoxide (CO)	.021	.122
Carbon Dioxide (CO2)	9.2	46.1
	Sum: 9.29	Sum: 46.563

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

I used the provided EPA Diesel Emissions Quantifier

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

375,000

**Project Details (4 of 5)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

The existing bus is a 2007 71 seat Diesel-Powered bus, currently being used for a normal morning and afternoon bus route with a max of 70 miles.

**Existing Bus Operation Frequency and Time of Use**

This bus is currently being used for a normal morning and afternoon bus route with a max of 70 miles. Average annual mileage is around 5,500 with an annual diesel consumption of 650 gallons.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Baxter

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

4UZAAXDC57CX00517

**Vehicle Make**

Thomas

**Vehicle Model**

FS 65 Chassis

**Vehicle Model Year**

2001

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
CX00517	NA	3176 Cat	10.3 Liter	2007	190	Ultra-Low Sulfur Diesel (ULSD)	820
							Sum: 820

**CORRECTION REQUEST (CREATED)**

**Please verify engine model year and engine family name.**

Please verify engine model year and engine family name. The vehicle is described as an earlier year than the engine model. If the engine was produced in 2007, an engine family name should be present on the engine tag and should consist of 12 characters. Please update/explain as needed.

Created on 10/31/2022 7:52 AM by **Mikayla Shaddon**

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	5500
2021	5500
	Average: 5500

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

5

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

All-Electric

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website. [Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	.054	.269
Fine Particulate (PM2.5)	.004	.018
Hydrocarbons (HC)	.011	.054
Carbon Monoxide (CO)	.021	.122
Carbon Dioxide (CO2)	9.2	46.1
	Sum: 9.29	Sum: 46.563

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

I used the provided EPA Diesel Emissions Quantifier

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible

project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

375,000

**Project Details (5 of 5)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

The existing bus is a 2009 71 seat Diesel-Powered bus, currently being used for a normal morning and afternoon bus route with a max of 70 miles.

**Existing Bus Operation Frequency and Time of Use**

This bus is currently being used for a normal morning and afternoon bus route with a max of 70 miles. Average annual mileage is around 5,100 with an annual diesel consumption of 728 gallons.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Baxter

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

4UZABRDT09CAA7561

**Vehicle Make**

Thomas

**Vehicle Model**

B2 Bus Chassis

**Vehicle Model Year**

2009

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
CAA7561	NA	Cummins	6.3 Liter	2009	210	Ultra-Low Sulfur Diesel (ULSD)	728
							Sum: 728

**CORRECTION REQUEST (CREATED)****Please verify engine family name.**

If the engine was produced in 2009, an engine family name should be present on the engine tag and should consist of 12 characters. Please update/explain as needed.

Created on 10/31/2022 7:53 AM by **Mikayla Shaddon**

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	5100
2021	5100
	Average: 5100

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

5

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

All-Electric

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

## **Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website. [Click here to access EPA's Diesel Emission Quantifier.](#)

### **Estimated Emissions Reductions**

<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Nitrogen Oxides (NOx)	.054	.269
Fine Particulate (PM2.5)	.004	.018
Hydrocarbons (HC)	.011	.054
Carbon Monoxide (CO)	.021	.122
Carbon Dioxide (CO2)	9.2	46.1
	Sum: 9.29	Sum: 46.563

### **Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

I used the provided EPA Diesel Emissions Quantifier

### **Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

### **Maximum Funding Assistance for Replacement of this Bus(\$)**

375,000

## **Project Benefits**

**Describe how this project will reduce environmental risks to economically-disadvantaged and other populations with disproportionately high and adverse human health or environmental impacts.**

The most obvious factor contributing to environmentally risky situations for economically disadvantaged people is economic hardship. Poor people have fewer resources to protect themselves from poor health caused by poor air quality or poor food quality. They also have less access to education so they don't understand how to protect themselves either. Both of these factors contribute to poor living conditions that increase the risk of disease. If people are sick and living in poor conditions, the risk of disease propagation skyrockets. Exposure to polluted areas increases that risk even further. Clean, safe, efficient transportation to a warm, safe, and dry educational facility, is the first tool to help this population.

**Describe how this project will reduce environmental risks to the public and sensitive populations.**

Electric vehicles emit less harmful exhausts than conventional vehicles. The electric motor produces far less heat and noise than a combustion engine. This is because an electric motor runs at constant speed without needing to reduce speed during acceleration or braking. This reduces stress on the vehicle's mechanical parts and protects the occupants from excessive temperatures and noise levels. Furthermore, electric cars are ideal for urban and suburban areas since they can navigate narrow streets with ease. By reducing risk factors, electric transportation is a smart move for public health.

**Describe how the project will contribute to the widespread adoption of alternative fuels and advance the establishment of alternative fuel corridors.**

Many people have embraced buses powered by alternate fuels because they're concerned about the environment. These consumers want to help reduce greenhouse gas emissions and the SUVs that contribute to them. Electric buses promise to be much cleaner than their gasoline counterparts due to their greater efficiency. However, these vehicles still need to prove themselves in order to earn the public's trust. Plus, they're still fairly expensive compared to gas-powered vehicles. Ultimately, it'll take time for people to warm up to the idea of alternative fuels for transportation trucks and buses. A great first step is to show the public that these vehicles are ready for use through school adoption and using the media to cover this roll out.

**Describe any other benefits this project would produce for the community.**

NONE PROVIDED

**Partnerships**

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Partnerships between the applicant and other organizations that advance deployment of alternative fuel stations or public charging infrastructure, or that fund additional vehicle replacements beyond those replaced under the ABC program are strongly encouraged. Partnerships that result in additional publicly available alternative fueling stations or publicly available DC fast chargers within two miles of a designated alternative-fuel corridor or in an underserved area are highly desirable. For the purposes of the ABC program, an underserved area is a location within the state where there are no existing alternative fuel or charging stations to support the replacement vehicles funded under the ABC program within fifty (50) miles of the project.

A full list of designated alternative fuel corridors are listed at [https://www.fhwa.dot.gov/environment/alternative\\_fuel\\_corridors/all\\_corridors/](https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/all_corridors/).

Existing alternative fueling stations and electric vehicle infrastructure can be identified using the United States Department of Energy's Alternative Fueling Station Locator: <https://afdc.energy.gov/stations/#/find/nearest>.

NOTE: No funding is available under this program for the construction of alternative fuel stations and the ABC program will only fund the applicable percentage of one depot charger per bus for projects that replace eligible diesel buses with all-electric buses.

**Describe any partnerships with other programs associated with this project, if applicable. Include contact information for a representative from any partner organizations.**  
NA

**Infrastructure Availability**

[bus.pdf - 10/28/2022 08:37 AM](#)  
**Comment**  
NONE PROVIDED

**Project Milestones**

**Identify each step necessary to complete the project and milestones for completing each step. Typical steps have been included as defaults. You can revise, add, or remove steps.**

<b>Project Step</b>	<b>Estimated Date (MM/DD/YY)</b>
Solicit bids in newspaper of statewide circulation	1/1/2023
Bid(s) awarded	1/20/2023
New vehicles ordered	1/20/2023
New vehicles delivered	7/3/2023
Old vehicles scrapped	7/3/2023
Final report and reimbursement request sent to DEQ	7/10/2023

**Describe your approach to achieving project milestones.**

Bids would probably begin, latest January 1 of 2023. Local board policy for purchases that large require a minimum of 2 weeks of advertisement and sealed bids. Bids would be opened and the winning bid would be chosen and taken to the school board on the third Thursday of January. The Friday after, the bus/buses would be ordered. I am expecting a large delivery time for these, so it would be safest to assume they will show up during the next school year, which is the easiest fiscally to pay for an item and then be reimbursed by a grant for the same fiscal year it is purchased in.

**Total Funding Assistance Requested Summary**



**Total Number of Vehicles**

5

**Maximum Funding Amount That Can Be Requested from DEQ (\$)**

1875000

**Funding Amount Requested from DEQ (\$)**

1875000

**Attachments**

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Date	Attachment Name	Context	User
10/28/2022 8:37 AM	bus.pdf	Attachment	Chris Knight

**Internal Data**

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Label	Value
Completeness Check	
Application Complete	Yes
Application Selected for Funding by Selection Committee?	Select
MOA Executed	
Reimbursement Packet Received	
Payment Sent	

**Status History**

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	User	Processing Status
8/22/2022 12:58:48 PM	Chris Knight	Draft
10/28/2022 8:47:03 AM	Chris Knight	Submitting
10/28/2022 8:47:16 AM	Chris Knight	Submitted

**Audit**

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Event	Event Description	Event By	Event Date
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Event	Event Description	Event By	Event Date
Submission Locked	Submission Locked	Mikayla Shaddon	10/31/2022 7:42 AM
Submission Unlocked	Submission Unlocked	Mikayla Shaddon	10/31/2022 7:56 AM

## Processing Steps

---

Step Name	Assigned To/Completed By	Date Completed
Form Submitted	Chris Knight	10/28/2022 8:47:16 AM
Ensure that all steps have been assigned to the appropriate staff member	Mikayla Shaddon	10/31/2022 7:42:34 AM
Set Submission Assigned Staff in Internal Controls	Mikayla Shaddon	10/31/2022 7:42:36 AM
Select Begin Review to Lock the Submission	Mikayla Shaddon	10/31/2022 7:42:47 AM
Application Completeness and Eligibility Review -If more information is needed or the project is ineligible, insert ineligible or incomplete work flow template between this step and the next step. If complete and eligible, proceed to the next step.	Mikayla Shaddon	
Provide Application to Evaluation Committee	Mikayla Shaddon	
After reviewing all applications received, proceed with the next steps if this application is recommended for funding. Otherwise, delete remaining steps and insert "Not recommended" workflow.	Mikayla Shaddon	
Notification of Award Recommendation	Mikayla Shaddon	
Prepare MOA & Route via P&P form	Mikayla Shaddon	
Change the Submission Status to "Issued"	Mikayla Shaddon	

# Advanced Bus and Clean (ABC) Transportation Program

version 2.5

(Submission #: HPM-9ZTA-Q2AKV, version 3)

## Details

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<b>Submitted</b>	11/1/2022 (19 days ago) by Charles W Blake
<b>Applicant</b>	PULASKI CO SPECIAL SCHOOL DIST
<b>Submission ID</b>	HPM-9ZTA-Q2AKV
<b>Submission Assigned Staff</b>	Mikayla Shaddon
<b>Status</b>	Deemed Complete
<b>Active Steps</b>	Provide Application to Evaluation Committee

## Form Input

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### Applicant Information

**Applicant Organization Name**  
PULASKI CO SPECIAL SCHOOL DIST

**Type of Organization**  
School District

**Applicant Organization Mailing Address**  
3924 NEELY RD  
LITTLE ROCK, ARKANSAS 72206

**Organizational DUNS number**  
716021158

**Congressional District**  
2nd

If you do not know your congressional district, you can find this information at <https://argis.ualr.edu/DistrictFinder/index.html>.

[Click here to be directed to the UALR District Finder](https://argis.ualr.edu/DistrictFinder/index.html)

## Project Manager Contact Information

<b>First Name</b>	<b>Last Name</b>	
Charles	Blake	
<b>Title</b>		
Director of Transportation		
<b>Phone Type</b>	<b>Number</b>	<b>Extension</b>
Business	5016070802	
<b>Email</b>		
cblake@pcssd.org		
<b>Fax</b>		
NONE PROVIDED		

## Description of Applicant's Organization

### Describe the work typically performed by the Applicant Organization

The Pulaski County Special School District is a public school district with approximately 12,000 students. The District covers 644 square miles, has 26 schools, and operates its school bus transportation department with a fleet of 201 buses.

### Number of Persons Employed by the Applicant Organization

2000

### Number of Years Applicant Organization Has Been in Existence in Arkansas

95

### Describe any Energy or Environmental Conservation Measures that the Applicant Organization Already Practices

All of our fueling sites are inspected each year by ADEQ regulated storage tanks division and each one is in good standing. The District operates an energy management system that sets back climate control points during non-operational as well as lighting controls in newer schools. Three new school campuses are LEED buildings. All campuses are smoke-free. 22 of the 25 school campuses participate in paper and plastic recycling programs as well as the recycling of cooking oils from the cafeterias. The school bus maintenance shops recycle bus oil and oil filters, as well as, recycling scrap metals in the bus shop.

### Describe any Past Performance in Successfully Completing and Managing Projects Similar in Size, Scope, and Relevance to the Proposed Project

The Pulaski County Special School District currently operates 201 school buses 197 diesel-fueled and 4 LPG: Propane. We transport 70% of the students enrolled and 30,000 plus per year on the field and athletic trips. We perform the daily maintenance and fueling services for all buses

## Project Details (1 of 20)

### Diesel-Powered School Bus; `EngineModelYear`

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

### Existing Vehicle Details

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

4DRBUAAN17A506921

**Vehicle Make**

International

**Vehicle Model**

CE

**Vehicle Model Year**

2007

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2U2142092	6NVXH0466AEA	International	D210	2006	210	Ultra-Low Sulfur Diesel (ULSD)	2766
							Sum: 2766

**CORRECTION REQUEST (APPROVED)**

**Please verify engine family name.**

Please verify engine family name. Engine family name should be present on engine tag and should consist of 12 characters.

Created on 10/31/2022 9:02 AM by **Mikayla Shaddon**

**1 COMMENT**

**Charles W Blake (cblake@pcssd.org) (10/31/2022 1:59 PM)**

According to the tag on the engine the engine family name is DT 466. I have attached an copy of one the engine tags to this grant.

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	1
2021	22126
	Average: 11063.5

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

10

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.161	1.609
Fine Particulate (PM2.5)	0.012	0.116
Hydrocarbons (HC)	0.020	0.204
Carbon Monoxide (CO)	-0.027	-0.267
Carbon Dioxide (CO2)	0	0
	Sum: 0.166	Sum: 1.662

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

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The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E



Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2U2142802	6NVXH0466AEA	International	D220	2006	220	Ultra-Low Sulfur Diesel (ULSD)	2490
							Sum: 2490

**CORRECTION REQUEST (APPROVED)**

**Please verify engine family name.**

Please verify engine family name. Engine family name should be present on engine tag and should consist of 12 characters.

Created on 10/31/2022 9:03 AM by **Mikayla Shaddon**

**1 COMMENT**

**Charles W Blake (cblake@pcssd.org) (10/31/2022 1:59 PM)**

According to the tag on the engine the engine family name is DT 466. I have attached an copy of one the engine tags to this grant.

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	9508
2021	19917
	Average: 14712.5

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

10

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

---



<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Nitrogen Oxides (NOx)	0.109	1.088
Fine Particulate (PM2.5)	0.008	0.081
Hydrocarbons (HC)	0.014	0.140
Carbon Monoxide (CO)	-0.016	-0.162
Carbon Dioxide (CO2)	0	0
	Sum: 0.115	Sum: 1.147

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (3 of 20)**

---

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABKBXA62F204390

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

2002

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46106817	1CEXH0505CAP	Cummins	ISC 260	2001	260	Ultra-Low Sulfur Diesel (ULSD)	1224
							Sum: 1224

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	6576
2021	9789
	Average: 8182.5

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

5

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.  
[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Nitrogen Oxides (NOx)	0.084	0.418
Fine Particulate (PM2.5)	0.006	0.028
Hydrocarbons (HC)	0.017	0.083
Carbon Monoxide (CO)	0	0
Carbon Dioxide (CO2)	0	0
	Sum: 0.107	Sum: 0.529

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (4 of 20)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

4DRBUAAN57A506940

**Vehicle Make**

International

**Vehicle Model**

CE

**Vehicle Model Year**

2007

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2U2142098	6NVXH0466AEA	International	D220	2006	220	Ultra-Low Sulfur Diesel (ULSD)	1102
							Sum: 1102

**CORRECTION REQUEST (APPROVED)**  
**Please verify engine family name.**

Please verify engine family name. Engine family name should be present on engine tag and should consist of 12 characters.  
 Created on 10/31/2022 9:04 AM by **Mikayla Shaddon**

**1 COMMENT**  
**Charles W Blake (cblake@pcssd.org) (10/31/2022 2:00 PM)**  
 According to the tag on the engine the engine family name is DT 466. I have attached an copy of one the engine tags to this grant.

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	13561

Year	Annual Miles (Miles per Year)
2021	8818
	Average: 11189.5

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

10

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.084	0.840
Fine Particulate (PM2.5)	0.006	0.064
Hydrocarbons (HC)	0.011	0.110
Carbon Monoxide (CO)	-0.011	-0.112
Carbon Dioxide (CO2)	0	0
	Sum: 0.09	Sum: 0.902

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**  
98,000

## **Project Details (5 of 20)**

### **Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

#### **Existing Vehicle Details**

---

##### **Existing Vehicle Type**

Diesel-Powered School Bus

##### **Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

##### **Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

##### **In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

##### **On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

##### **Vehicle Identification Number**

4DRBUAAN97A506942

##### **Vehicle Make**

International

##### **Vehicle Model**

CE

##### **Vehicle Model Year**

2007

#### **Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

<b>Engine Serial Number</b>	<b>Engine Family Name</b>	<b>Engine Make</b>	<b>Engine Model</b>	<b>Engine Model Year</b>	<b>Horsepower</b>	<b>Fuel Type</b>	<b>Fuel Used (gallons per year)</b>
2U2142986	6NVXH0466AEA	International	D220	2006	220	Ultra-Low Sulfur Diesel (ULSD)	891

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
							Sum: 891

**CORRECTION REQUEST (APPROVED)**

**Please verify engine family name.**

Please verify engine family name. Engine family name should be present on engine tag and should consist of 12 characters.

Created on 10/31/2022 9:04 AM by **Mikayla Shaddon**

**1 COMMENT**

**Charles W Blake (cblake@pcssd.org) (10/31/2022 2:00 PM)**

According to the tag on the engine the engine family name is DT 466. I have attached an copy of one the engine tags to this grant.

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	5087
2021	7127
	Average: 6107

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

10

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.048	0.484
Fine Particulate (PM2.5)	0.004	0.040
Hydrocarbons (HC)	0.007	0.067
Carbon Monoxide (CO)	-0.004	-0.040

<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Carbon Dioxide (CO2)	0	0
	Sum: 0.055	Sum: 0.551

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (6 of 20)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski



**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABKBXA12F204393

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

2002

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46111483	1CEXH0505CAP	Cummins	ISC 260	2001	260	Ultra-Low Sulfur Diesel (ULSD)	1346
							Sum: 1346

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	1813
2021	10764
	Average: 6288.5

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

5

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Nitrogen Oxides (NOx)	0.067	0.334
Fine Particulate (PM2.5)	0.005	0.023
Hydrocarbons (HC)	0.013	0.067
Carbon Monoxide (CO)	0.001	0.005
Carbon Dioxide (CO2)	0	0
	Sum: 0.086	Sum: 0.429

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (7 of 20)**

**Diesel-Powered School Bus; `EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABKBXA32F204394

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

2002

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46106680	1CEXH0505CAP	Cummins	ISC 260	2001	260	Ultra-Low Sulfur Diesel (ULSD)	1591
							Sum: 1591

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	7986
2021	12732
	Average: 10359

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

5

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.  
[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Nitrogen Oxides (NOx)	0.103	0.513
Fine Particulate (PM2.5)	0.007	0.033
Hydrocarbons (HC)	0.020	0.101
Carbon Monoxide (CO)	-0.001	-0.005
Carbon Dioxide (CO2)	0	0
	Sum: 0.129	Sum: 0.642

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (8 of 20)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABKBXA52F204395

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

2002

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46109083	1CEXH0505CAP	Cummins	ISC 260	2001	260	Ultra-Low Sulfur Diesel (ULSD)	2580
							Sum: 2580

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	4916
2021	20636
	Average: 12776

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

5

**New Vehicle Details****Replacement Bus Fuel Type**

LPG

## Percentage of Time the Affected Equipment will be Operated in Arkansas

100

## Emission Reductions Anticipated from the Proposed Project

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.124	0.62
Fine Particulate (PM2.5)	0.008	0.040
Hydrocarbons (HC)	0.024	0.122
Carbon Monoxide (CO)	-0.002	-0.011
Carbon Dioxide (CO2)	0	0
	Sum: 0.154	Sum: 0.771

### Describe the methodology used to calculate estimated emissions reductions from the proposed project.

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

### Maximum Funding Assistance for this Replacement Bus

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

### Maximum Funding Assistance for Replacement of this Bus(\$)

98,000

## Project Details (9 of 20)

### Diesel-Powered School Bus;`EngineModelYear`

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

### Existing Vehicle Details

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABKBXA72F204396

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

2002

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46109015	1CEXH0505CAP	Cummins	ISC 260	2001	260	Ultra-Low Sulfur Diesel (ULSD)	938
							Sum: 938

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	5360
2021	7506
	Average: 6433

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

5

## New Vehicle Details

---

### Replacement Bus Fuel Type

LPG

### Percentage of Time the Affected Equipment will be Operated in Arkansas

100

### Emission Reductions Anticipated from the Proposed Project

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.068	0.341
Fine Particulate (PM2.5)	0.005	0.023
Hydrocarbons (HC)	0.018	0.069
Carbon Monoxide (CO)	0.001	0.004
Carbon Dioxide (CO2)	0	0
	Sum: 0.092	Sum: 0.437

### Describe the methodology used to calculate estimated emissions reductions from the proposed project.

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

### Maximum Funding Assistance for this Replacement Bus

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

### Maximum Funding Assistance for Replacement of this Bus(\$)

98,000

## Project Details (10 of 20)

Diesel-Powered School Bus;`EngineModelYear`



Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABKBXA92F204397

**Vehicle Make**

Blue Bird

**Vehicle Model**

All American

**Vehicle Model Year**

2002

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46111500	1CEXH0505CAP	Cummins	ISC 260	2001	260	Ultra-Low Sulfur Diesel (ULSD)	1305
							Sum: 1305

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	11764
2021	10443
	Average: 11103.5

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

5

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.989	4.945
Fine Particulate (PM2.5)	0.060	0.299
Hydrocarbons (HC)	0.189	0.943
Carbon Monoxide (CO)	-0.050	-0.250
Carbon Dioxide (CO2)	0	0
	Sum: 1.188	Sum: 5.937

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000



**CORRECTION REQUEST (APPROVED)**

**Please verify engine family name.**

Please verify engine family name. Engine family name should be present on engine tag and should consist of 12 characters.

Created on 10/31/2022 9:06 AM by **Mikayla Shaddon**

**1 COMMENT**

**Charles W Blake (cblake@pcssd.org) (10/31/2022 2:00 PM)**

According to the tag on the engine the engine family name is DT 466. I have attached an copy of one the engine tags to this grant.

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	14264
2021	15604
	Average: 14934

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

11

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.051	0.559
Fine Particulate (PM2.5)	0.000	0.001
Hydrocarbons (HC)	0.003	0.036
Carbon Monoxide (CO)	-0.058	-0.639
Carbon Dioxide (CO2)	0	0
	Sum: -0.004	Sum: -0.043

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (12 of 20)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BABKBXA42F204405

**Vehicle Make**  
Blue Bird

**Vehicle Model**  
All American

**Vehicle Model Year**  
2002

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46111630	1CEXH0505CAP	Cummins	ISC 260	2001	260	Ultra-Low Sulfur Diesel (ULSD)	1331
							Sum: 1331

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	4830
2021	10650
	Average: 7740

**Number of days operated per week (on average) in 2020 and 2021**  
5

**Remaining Life (Years)**  
5

**New Vehicle Details**

---

**Replacement Bus Fuel Type**  
LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**  
100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.080	0.398
Fine Particulate (PM2.5)	0.005	0.026
Hydrocarbons (HC)	0.016	0.080

<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Carbon Monoxide (CO)	0.000	0.001
Carbon Dioxide (CO2)	0	0
	Sum: 0.101	Sum: 0.505

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**  
98,000

**Project Details (13 of 20)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BAKF2CPA47F241701

**Vehicle Make**

Blue Bird

**Vehicle Model**

Vision

**Vehicle Model Year**

2007

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
S46639919	6CEXH0359BAG	Cummins	ISB 200	2006	200	Ultra-Low Sulfur Diesel (ULSD)	1495
							Sum: 1495

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	11893
2021	11962
	Average: 11927.5

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

10

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**



<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Nitrogen Oxides (NOx)	0.089	0.893
Fine Particulate (PM2.5)	0.007	0.067
Hydrocarbons (HC)	0.012	0.117
Carbon Monoxide (CO)	-0.012	-0.122
Carbon Dioxide (CO2)	0	0
	Sum: 0.096	Sum: 0.955

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (14 of 20)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BAKF CPA87F240308

**Vehicle Make**

Blue Bird

**Vehicle Model**

Vision

**Vehicle Model Year**

2007

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
S46639186	6CEXH0359BAG	Cummins	ISB 200	2006	200	Ultra-Low Sulfur Diesel (ULSD)	1752
							Sum: 1752

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	7048
2021	14015
	Average: 10531.5

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

10

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.  
[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.079	0.795
Fine Particulate (PM2.5)	0.006	0.061
Hydrocarbons (HC)	0.010	0.105
Carbon Monoxide (CO)	-0.010	-0.102
Carbon Dioxide (CO2)	0	0
	Sum: 0.085	Sum: 0.859

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (15 of 20)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BAKBCPA98F252819

**Vehicle Make**

Blue Bird

**Vehicle Model**

Vision

**Vehicle Model Year**

2008

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46743341	7CEXH0408BAC	Cummins	ISB 200	2007	200	Ultra-Low Sulfur Diesel (ULSD)	901
							Sum: 901

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	1004
2021	7204
	Average: 4104

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

11

**New Vehicle Details**

**Replacement Bus Fuel Type**  
LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**  
100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.  
[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

<b>Pollutant</b>	<b>Annual Tons Reduced</b>	<b>Lifetime Annual Tons Reduced</b>
Nitrogen Oxides (NOx)	0.016	0.175
Fine Particulate (PM2.5)	0.000	0.000
Hydrocarbons (HC)	0.001	0.013
Carbon Monoxide (CO)	-0.015	0.165
Carbon Dioxide (CO2)	0	0
	Sum: 0.002	Sum: 0.353

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**  
98,000

**Project Details (16 of 20)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BAKBCPA98F252822

**Vehicle Make**

Blue Bird

**Vehicle Model**

Vision

**Vehicle Model Year**

2008

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46741956	7CEXH0408BAC	Cummins	ISB 200	2007	200	Ultra-Low Sulfur Diesel (ULSD)	4577
							Sum: 4577

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	11734
2021	36619
	Average: 24176.5

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

11

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.081	0.886
Fine Particulate (PM2.5)	0.000	0.001
Hydrocarbons (HC)	0.005	0.056
Carbon Monoxide (CO)	-0.095	-1.044
Carbon Dioxide (CO2)	0	0
	Sum: -0.009	Sum: -0.101

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (17 of 20)**

## Diesel-Powered School Bus;`EngineModelYear`

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

### Existing Vehicle Details

---

#### Existing Vehicle Type

Diesel-Powered School Bus

#### Typical Function of Existing Bus Involved in the Proposed Project

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

#### Existing Bus Operation Frequency and Time of Use

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

#### In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?

Pulaski

#### On-Highway Weight Class

Class 7: 26,001 – 33,000 lbs.

#### Vehicle Identification Number

1BAKBCPA09F262270

#### Vehicle Make

Blue Bird

#### Vehicle Model

Vision

#### Vehicle Model Year

2009

#### Highway Engine Information (Complete one row for each engine that powers the existing vehicle)

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46914315	8CEXH0408BAC	Cummins	ISB 200	2008	200	Ultra-Low Sulfur Diesel (ULSD)	2374
							Sum: 2374

#### Annual Miles Traveled

Year	Annual Miles (Miles per Year)
2020	15088

---



Year	Annual Miles (Miles per Year)
2021	18988
	Average: 17038

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

12

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.058	0.691
Fine Particulate (PM2.5)	0.000	0.001
Hydrocarbons (HC)	0.004	0.045
Carbon Monoxide (CO)	-0.067	-0.798
Carbon Dioxide (CO2)	0	0
	Sum: -0.005	Sum: -0.061

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**  
98,000

**Project Details (18 of 20)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

1BAKBCPA09F262284

**Vehicle Make**

Blue Bird

**Vehicle Model**

Vision

**Vehicle Model Year**

2009

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
46908227	8CEXH0408BA	Cummins	ISB 200	2008	200	Ultra-Low Sulfur Diesel (ULSD)	1122

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
							Sum: 1122

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	17459
2021	8974
	Average: 13216.5

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

12

**New Vehicle Details**

---

**Replacement Bus Fuel Type**

LPG

**Percentage of Time the Affected Equipment will be Operated in Arkansas**

100

**Emission Reductions Anticipated from the Proposed Project**

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

**Estimated Emissions Reductions**

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.045	0.543
Fine Particulate (PM2.5)	0.000	0.001
Hydrocarbons (HC)	0.003	0.036
Carbon Monoxide (CO)	-0.051	-0.615
Carbon Dioxide (CO2)	0	0
	Sum: -0.003	Sum: -0.035

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**

98,000

**Project Details (19 of 20)**

**Diesel-Powered School Bus;`EngineModelYear`**

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

4DRBUAAN27A506913

**Vehicle Make**

International

**Vehicle Model**

CE

**Vehicle Model Year**

2007

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

---

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2U2143157	6NVXH0466AEA	Cummins	International	2006	210	Ultra-Low Sulfur Diesel (ULSD)	1719
							Sum: 1719

#### Annual Miles Traveled

Year	Annual Miles (Miles per Year)
2020	17255
2021	13755
	Average: 15505

#### Number of days operated per week (on average) in 2020 and 2021

5

#### Remaining Life (Years)

10

#### New Vehicle Details

---

#### Replacement Bus Fuel Type

LPG

#### Percentage of Time the Affected Equipment will be Operated in Arkansas

100

#### Emission Reductions Anticipated from the Proposed Project

---

EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

#### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.053	0.527
Fine Particulate (PM2.5)	0.000	0.001
Hydrocarbons (HC)	0.003	0.034
Carbon Monoxide (CO)	-0.060	-0.604
Carbon Dioxide (CO2)	0	0
	Sum: -0.004	Sum: -0.042

**Describe the methodology used to calculate estimated emissions reductions from the proposed project.**

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

**Maximum Funding Assistance for this Replacement Bus**

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

**Maximum Funding Assistance for Replacement of this Bus(\$)**  
98,000

**Project Details (20 of 20)**

**Diesel-Powered School Bus;`EngineModelYear`**

**CORRECTION REQUEST (APPROVED)**  
**Existing buses must be 2009 or older**

Please remove or update information to replace different bus that meets eligibility requirements  
Created on 10/31/2022 8:42 AM by **Mikayla Shaddon**

**1 COMMENT**  
**Charles W Blake (cblake@pcssd.org) (10/31/2022 4:10 PM)**  
Changed bus to qualifying buses

Answer the following questions for each vehicle to be replaced. Click the "Add New Project Details" button at the end of this section for each additional vehicle.

**Existing Vehicle Details**

---

**Existing Vehicle Type**

Diesel-Powered School Bus

**Typical Function of Existing Bus Involved in the Proposed Project**

Transports students to and from schools and school functions on bus routes, on-field, and athletic trips.

**Existing Bus Operation Frequency and Time of Use**

The buses will operate 178 school days per year with routes running Monday-Friday from 5:30 AM-5:30 PM. The bus fleet covers 644 square miles per day in Pulaski County and all parts of the state for field and athletic trips. We run 440 routes per day and 78,320 routes per year.

**In which County or Counties is the Existing Vehicle or Equipment Involved in the Proposed Project Typically Operated?**

Pulaski

**On-Highway Weight Class**

Class 7: 26,001 – 33,000 lbs.

**Vehicle Identification Number**

4DRBUAAN87A506379

**Vehicle Make**

International

**Vehicle Model**

CE

**Vehicle Model Year**

2007

**Highway Engine Information (Complete one row for each engine that powers the existing vehicle)**

Engine Serial Number	Engine Family Name	Engine Make	Engine Model	Engine Model Year	Horsepower	Fuel Type	Fuel Used (gallons per year)
2U2143155	6NVXH0466AEA	International	D210	2006	210	Ultra-Low Sulfur Diesel (ULSD)	1333
							Sum: 1333

**Annual Miles Traveled**

Year	Annual Miles (Miles per Year)
2020	14816
2021	10663
	Average: 12739.5

**Number of days operated per week (on average) in 2020 and 2021**

5

**Remaining Life (Years)**

10

**New Vehicle Details****Replacement Bus Fuel Type**

LPG

## Percentage of Time the Affected Equipment will be Operated in Arkansas

100

## Emission Reductions Anticipated from the Proposed Project

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EPA's Diesel Emission Quantifier may be used to quantify the emissions benefit anticipated from the proposed project. This tool is freely available from the EPA website.

[Click here to access EPA's Diesel Emission Quantifier.](#)

### Estimated Emissions Reductions

Pollutant	Annual Tons Reduced	Lifetime Annual Tons Reduced
Nitrogen Oxides (NOx)	0.044	0.437
Fine Particulate (PM2.5)	0.000	0.001
Hydrocarbons (HC)	0.003	0.029
Carbon Monoxide (CO)	-0.049	-0.494
Carbon Dioxide (CO2)	0	0
	Sum: -0.002	Sum: -0.027

### Describe the methodology used to calculate estimated emissions reductions from the proposed project.

This is the methodology used to calculate estimated emissions reductions from this proposed project. We calculated the amount of pollutants emitted from diesel fuel per gallon and multiply the number of gallons of diesel fuel used per year.

Then we took the amount of pollutants emitted from propane per gallon and multiply the number of gallons of propane used per year.

After getting the totals we subtracted the pollutants emitted per total gallons of propane per year from the total number of diesel gallons used per year.

### Maximum Funding Assistance for this Replacement Bus

---

The maximum funding assistance value for eligible project costs associated with replacement of this bus is calculated based on user inputs.

Projects selected for award under this program will receive reimbursement for eligible project costs or the maximum funding assistance value, whichever is less, upon completion of the project and receipt by E&E of all required documents. The maximum funding assistance and terms for reimbursement shall be established in a Memorandum of Agreement (MOA) signed by E&E and selected project sponsors. Expenses that pre-date the signed MOA are not eligible for reimbursement. E&E retains the right to partially fund projects if so specified in the MOA.

### Maximum Funding Assistance for Replacement of this Bus(\$)

98,000

## Project Benefits

### Describe how this project will reduce environmental risks to economically-disadvantaged and other populations with disproportionately high and adverse human health or environmental impacts.

Better for Students: Diesel exhaust produces particulate matter that aggravates asthma and other conditions. With propane, there's no smell or particulate matter. Propane buses are much quieter, enabling students to converse and drivers to hear what's happening inside and outside the bus. Buses will be placed on routes in economically disadvantaged neighborhoods.



**Describe how this project will reduce environmental risks to the public and sensitive populations.**  
Switching to environmentally friendly propane buses eliminates an estimated 80% of the smog-producing hydrocarbon generated by diesel engines.

**Describe how the project will contribute to the widespread adoption of alternative fuels and advance the establishment of alternative fuel corridors.**

The district will allow local media to do articles and ride-along on new buses as well as post the new fleet additions on its website. We push the storyline of saving the taxpayers money and improving air quality and making other districts aware that this option exists

**Describe any other benefits this project would produce for the community.**

Savings Propane currently costs about half as much as diesel, which adds up to significant savings that districts can use for teachers, resources of educational tools. Lower cost of ownership over time, the district learns that it's cheaper to maintain propane-powered school buses. Propane buses are also notable for what they don't produce: a black cloud of diesel smoke at every bus stop. On-site fueling, superior winter performance.

### **Partnerships**

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Partnerships between the applicant and other organizations that advance deployment of alternative fuel stations or public charging infrastructure, or that fund additional vehicle replacements beyond those replaced under the ABC program are strongly encouraged. Partnerships that result in additional publicly available alternative fueling stations or publicly available DC fast chargers within two miles of a designated alternative-fuel corridor or in an underserved area are highly desirable. For the purposes of the ABC program, an underserved area is a location within the state where there are no existing alternative fuel or charging stations to support the replacement vehicles funded under the ABC program within fifty (50) miles of the project.

A full list of designated alternative fuel corridors are listed at [https://www.fhwa.dot.gov/environment/alternative\\_fuel\\_corridors/all\\_corridors/](https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/all_corridors/).

Existing alternative fueling stations and electric vehicle infrastructure can be identified using the United States Department of Energy's Alternative Fueling Station Locator: <https://afdc.energy.gov/stations/#/find/nearest>.

NOTE: No funding is available under this program for the construction of alternative fuel stations and the ABC program will only fund the applicable percentage of one depot charger per bus for projects that replace eligible diesel buses with all-electric buses.

**Describe any partnerships with other programs associated with this project, if applicable. Include contact information for a representative from any partner organizations.**

N/A

### **Infrastructure Availability**

[List of Fueling Sites.docx - 09/30/2022 12:08 PM](#)

**Comment**

NONE PROVIDED

### **Project Milestones**

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**Identify each step necessary to complete the project and milestones for completing each step. Typical steps have been included as defaults. You can revise, add, or remove steps.**

<b>Project Step</b>	<b>Estimated Date (MM/DD/YY)</b>
Solicit bids in newspaper of statewide circulation	11/07/2022
Bid(s) awarded	12/07/2022

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Project Step	Estimated Date (MM/DD/YY)
New vehicles ordered	12/08/2022
New vehicles delivered	09/04/2023
Old vehicles scrapped	09/15/2023
Final report and reimbursement request sent to DEQ	10/19/2023

**Describe your approach to achieving project milestones.**

When project approval is granted the bids for two propane school buses will be solicited through the Arkansas Democrat-Gazette newspaper. The bids with all state-required bus specifications will be submitted to the purchasing department of Pulaski County Special School District. The bids will be opened on November 7, 2022 , with all bidders invited to attend the bid openings. The bus specifications and bid details will be reviewed and awarded to the low-cost bidder. Bids will request a 60-day delivery of equipment and old equipment will be scrapped on the day of delivery. The final ADEQ report will be submitted within 30 days of project completion.

**CORRECTION REQUEST (APPROVED)**  
**Please verify date in description**

Created on 10/31/2022 8:53 AM by **Mikayla Shaddon**

1 COMMENT  
**Charles W Blake (cblake@pcssd.org) (10/31/2022 2:01 PM)**  
 The date should be November 7, 2022

**Total Funding Assistance Requested Summary**

**Total Number of Vehicles**

20

**Maximum Funding Amount That Can Be Requested from DEQ (\$)**

1960000

**Funding Amount Requested from DEQ (\$)**

1960000

**Attachments**

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Date	Attachment Name	Context	User
9/30/2022 12:08 PM	List of Fueling Sites.docx	Attachment	Charles Blake

**Internal Data**

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Label	Value
Completeness Check	
Application Complete	Yes

---

Label	Value
Application Selected for Funding by Selection Committee?	Select
MOA Executed	
Reimbursement Packet Received	
Payment Sent	

## Status History

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	User	Processing Status
11/1/2022 9:16:37 AM	Charles W Blake	Draft
11/1/2022 9:30:03 AM	Charles W Blake	Submitting
11/1/2022 9:30:18 AM	Charles W Blake	Submitted
11/1/2022 10:49:47 AM	Mikayla Shaddon	Deemed Complete

## Audit

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Event	Event Description	Event By	Event Date
Submission Locked	Submission Locked	Mikayla Shaddon	10/31/2022 8:05 AM
Submission Unlocked	Submission Unlocked	Mikayla Shaddon	10/31/2022 9:08 AM
Submission Locked	Submission Locked	Mikayla Shaddon	11/1/2022 10:44 AM
Submission Unlocked	Submission Unlocked	Mikayla Shaddon	11/1/2022 10:49 AM
Submission Locked	Submission Locked	Mikayla Shaddon	11/1/2022 10:49 AM

## Processing Steps

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Step Name	Assigned To/Completed By	Date Completed
Form Submitted	Charles W Blake	11/1/2022 9:30:18 AM
Ensure that all steps have been assigned to the appropriate staff member	Mikayla Shaddon	10/31/2022 8:04:41 AM
Set Submission Assigned Staff in Internal Controls	Mikayla Shaddon	10/31/2022 8:04:43 AM
Select Begin Review to Lock the Submission	Mikayla Shaddon	10/31/2022 8:05:29 AM
Application Completeness and Eligibility Review -If more information is needed or the project is ineligible, insert ineligible or incomplete work flow template between this step and the next step. If complete and eligible, proceed to the next step.	Mikayla Shaddon	11/1/2022 10:49:46 AM
Provide Application to Evaluation Committee	Mikayla Shaddon	

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Step Name	Assigned To/Completed By	Date Completed
After reviewing all applications received, proceed with the next steps if this application is recommended for funding. Otherwise, delete remaining steps and insert "Not recommended" workflow.	Mikayla Shaddon	
Notification of Award Recommendation	Mikayla Shaddon	
Prepare MOA & Route via P&P form	Mikayla Shaddon	
Change the Submission Status to "Issued"	Mikayla Shaddon	

## Revisions

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Revision	Revision Date	Revision By
Revision 1	8/29/2022 3:39 PM	Charles W Blake
Revision 2	10/31/2022 1:48 PM	Charles W Blake
Revision 3	11/1/2022 9:16 AM	Charles W Blake