## BENEFICIARY ELIGIBLE MITIGATION ACTION CERTIFICATION

Beneficiary State of Arkansas

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

Action Title:	Class 4-7 Local Freight Trucks (Medium Trucks)		
Beneficiary's Project ID:	Clean Fuels		
Funding Request No.	5		
Request Type:	□ Reimbursement □ Advance		
	✓ Other (specify): Program management plan,		
	program reporting plan are included with this		
	submission. Attachment A Funding Request &		
	Direction will be attached to this Eligible Mitigation		
	Action Certification (EMAC) as projects, and		
(select one or more)	associated administrative work, are completed.		
	/ D		
Payment to be made to:	✓ Beneficiary		
	✓ Other (specify):		
	A funding request directing administrative costs will be submitted generately. Project related costs will be		
	be submitted separately. Project-related costs will be		
	directed to the project sponsor using the Payee		
	Information Upload Template in accordance with the		
(select one or more)	WT Mitigation Arkansas Disbursing Agreement.		
Funding Request &	☐ Attached to this Certification		
Direction (Attachment A)	✓ To be Provided Separately		

## **SUMMARY**

Eligible Mitigation Action ✓ Appendix D-2 item (specify): Item 6: Class 4-7 Local Freight Trucks				
(Medium Trucks)				
<b>Action Type</b>	☐ Item 10 - DERA Option (5.2.12) (specify and attach DERA Proposal):			
Explanation of how funding	ng request fits into Beneficiary's Mitigation Plan (5.2.1):			
This Eligible Mitigation Act	ion Certification (EMAC) implements the Arkansas Clean Fuels Funding			
Assistance Program describe	ed in section IV.E. of Arkansas's Beneficiary Mitigation Plan as revised.			
<b>Detailed Description of Mi</b>	tigation Action Item Including Community and Air Quality Benefits			
(5.2.2):				
Based on a proposal receive	d from City of West Memphis Public Works Department under Arkansas			
Clean Fuels Funding Assista	ince Program, DEQ requests approval from the Trustee to direct funds for			
the replacement of one diese	el powered refuse truck year model 2002 with one CNG powered refuse			
truck. The vehicles to be rep	laced will be scrapped in accordance with the requirements of the Trust. All			

vehicles to be replaced pursuant to this Certification meet the requirements specified for Eligible Mitigation Action Unit 1.

The replacement projects will reduce emissions of nitrogen oxides and particulate matter from each vehicle lessening potential exposure of Arkansans to harmful air pollutants including ozone, fine particulate matter, and nitrogen dioxide.

DEQ will request reimbursement of eligible expenses be directed to the applicant once the projects are completed and all required documentation has been submitted to DEQ.

DEQ will also submit a reimbursement request for personnel costs and fringe benefits associated with implementing the Clean Fuels Program. Administrative costs will not exceed 15% of the total cost the Clean Fuels Program.

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

DEQ estimated anticipated NOx reductions from each of the selected projects using the AFLEET Heavy-Duty Vehicle Emission Calculator provided by Argonne National Laboratory <a href="https://afleet-web.es.anl.gov/hdv-emissions-calculator/">https://afleet-web.es.anl.gov/hdv-emissions-calculator/</a>

	Replacement technology	New Vehicle NOx (lb.) Emissions benefits	New Vehicle Cost NOx (lb.) cost effectiveness
City of West Memphis Public Works	CNG	13982.96	\$13.00
Department Refuse Truck			

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.adeq.state.ar.us/air/planning/vw.aspx. DEQ will upload information including estimated emissions reductions, program implementation milestones, and project recipients and awards to the same web page.

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

A cost-share by the City of West Memphis Public Works Department is required for all projects funded under the Clean Fuels program. The table below provides the funding assistance amounts and minimum cost-share for each organization and project type.

Organization Type	Project Type	Maximum Funding Assistance (Percentage of Project Cost)	Minimum Mandatory Cost Share from Project Sponsor (Percentage of Project Cost)
Government Owned	Replacement	70%	30%

ADEQ retains the right to partially fund proposals.

# 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, DEQ provided notice to the US. Fish and Wildlife Service, U.S. National Park Service, and the U.S. 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.adeq.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 web page.

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).

In this instance, the replacement of the eligible vehicle with the CNG refuse truck will reduce emissions in Crittenden County, which is a maintenance area for that national ambient air quality standard for ozone and, as such, contains communities that have historically borne the impacts of NOx emission from Interstate 40 and nearby Memphis.

# ATTACHMENTS (CHECK BOX IF ATTACHED)

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

#### **CERTIFICATIONS**

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

- 1. This application is submitted on behalf of Beneficiary <u>Arkansas</u>, 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: <u>12/27/2024</u>	Demetchbough
	Demetria Kimbrough Associate Director, Office of Air Quality
	Arkansas Department of Energy and Environment [LEAD AGENCY]
	for
	_State of Arkansas IBENEFICIARYI

#### **ATTACHMENT B**

## **CLEAN FUELS PROJECT MANAGEMENT PLAN**

## PROGRAM SCHEDULE AND MILESTONES

The Clean Fuels program was designed to be a four year program to provide funding assistance on a competitive basis for projects that reduce emissions by repowering or replacing eligible diesel vehicles with diesel, alternate-fueled (low NOx compressed natural gas, propane, or liquefied natural gas), or all-electric vehicle technologies. DEQ's Clean Fuels Program year 1 received 1 proposal for eligible mitigation action Item 6: Class 4-7 Local Freight Trucks (Medium Trucks) which proposes to replace one diesel powered refuse truck with one LPG powered refuse truck

Milestone	Date	
DEQ and Project Manager sign Memorandum of Agreement (MOA) specifying the	August, 2020	
terms of the project.		
Project Manager certifies project completion and provides required documentation to	Within 6 Months	
DEQ.	of Signature of	
	MOA Est.	
	February 2021	
DEQ completes review of Project Manager DISTRICT documentation and certifies	Within 30 days	
payment direction to Trustee.	of complete	
	documentation	
	receipt	
Trustee acknowledges receipt of direction for payment(s).	Within 5 days of	
	direction for	
	payment	
DEQ provides monthly detailed invoices for administrative costs as described	Within 60 days	
in the project budget.	of month for	
	which payment	
	is requested	
DEQ Reports Program Completion.	Within 60 Days	
	of	
	reimbursement	
	for last project	

## **PROGRAM BUDGET**

Cost-share requirements are specified in the Clean Fuels Program Beneficiary Eligible Mitigation Action Certification form. A total of \$217,875 has been allocated to the Clean Fuels Program year one, with an estimated \$185,225 to be awarded to program participants for completing projects and no more than \$32,650 for administrative costs associated with running the program.

Period of Performance: Fall 2019 to Winter 2020			
Budget Category	Share of Total Program Budget to be funded by the Trust	Estimated Cost-Share (Project Sponsor)	
Program Participants Support	\$185,225	\$79,395	
Administrative	\$32,650	\$0	
Project Totals	\$217,875	\$79,395	

## **PROJECTED TRUST ALLOCATIONS:**

The table below indicates anticipated funds to be drawn down from Arkansas's allocation under the Trust for the Clean Fuels Program. The amounts in this table reflect only the portion of Arkansas's allocation allotted to the Clean Fuels Program in the Arkansas Beneficiary Mitigation Plan. Because specific projects that will be awarded under this program will depend upon applications received, cost share and total project costs—which includes cost share—have not been included in the table below.

Project Trust Allocations	2019	2020
1. Anticipated Annual Project Funding Request to be paid through the Trust		\$217,875.00
2. Anticipated Annual Cost Share		\$79,395.00
3. Anticipated Total Project Funding by Year (line 1 plus line 2)		\$297,270.00
4. Cumulative Trustee Payments Requested to Date Against Cumulative Beneficiary Allocation (DERA Go RED! and Level 2 EVSE)	\$275,066.00	\$2,037,788.24
5. Current Beneficiary Project Funding to be Paid through Trust (line 1)		\$217,875.00
6. Total Funding Allocated to Beneficiary, inclusive of Current Action by Year (line 4 plus line 5)	\$275,066.00	\$2,255,735.29
7. Beneficiary Share of Estimated Funds Remaining in Trust	\$14,647,709.09	\$14,372,643.09
8. Net Beneficiary Funds Remaining in Trust, net of cumulative Beneficiary Funding Actions (Line 7 minus line 6)	\$14,372,643.09	\$12,116,907.80

#### ATTACHMENT C

# <u>DETAILED PLAN FOR REPORTING ON ELIGIBLE MITIGATION ACTION</u> <u>IMPLEMENTATION</u>

The Arkansas Department of Energy and Environment (E&E), Division of Environmental Quality (DEQ) will provide detailed reporting on the Clean Fuels Funding Assistance 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 <a href="https://www.ADEQ.state.ar.us/air/planning/vw.aspx">https://www.ADEQ.state.ar.us/air/planning/vw.aspx</a>. Guidance on how to apply for reimbursement under the CLEAN FUELS Funding Assistance 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 publicfacing website upon receipt.

DEQ has developed a report template for documenting implementation of the CLEAN FUELS Funding Assistance 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: Repower or Replacement
- Fleet Owner
- Primary Place of Performance
  - o State,
  - o County,
  - o City,
  - o ZIP Code
- Eligible Vehicle/Equipment Information
  - Vehicle Size Class
  - Vehicle Type
  - Vehicle Identification Number
  - Vehicle Make
  - Vehicle Model
  - Vehicle Model Year

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

#### ATTACHMENT D

# <u>Detailed cost estimate from selected or potential vendors for each proposed expenditure exceeding \$25,000</u>

DEQ's Clean Fuels program provides reimbursement for proposed projects according to the funding limits and mandatory cost-Share requirements provided by the VW Mitigation . The following attachments are the estimated cost provided in the Applicants applications. Final documentation of actual expenses will be required upon completion of projects listed in the applications prior to reimbursement request.

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# **Arkansas Clean Fuels Program**

version 1.5

(Submission #: HNT-2PF7-C73WJ, version 1)

### **Details**

Form Alias Arkansas Clean Fuels Program

Form Started 9/26/2019 2:00 PM by Amanda Cecilia Hicks
Form Submitted 11/5/2019 9:55 AM by Amanda Cecilia Hicks

Submission # HNT-2PF7-C73WJ

Status Submitted

AFIN: City of West Memphis Public Works Department

# **Form Input**

# Organization

#### Organization

Please provide the following information about the organization.

#### **Organization Name**

City of West Memphis Public Works Department

Mailing Address - Line 1

PO Box 1728

Mailing Address - Line 2

NONE PROVIDED

City

West Memphis

State

Arkansas

**Zip Code** 

72303

County

Crittenden

#### Type of Organization

Local government

#### Describe the organization's size and type of work usually performed.

The Public Works Department for the City of West Memphis employs approximately 80 employees, which include the Sanitation Department, Street Department, and Fleet Mechanic's Department. The Sanitation Department is responsible for picking up residential and commercial garbage via Rear-End Loaders, Knuckle Boom Trucks for bulk waste, and Front-End Loaders for commercial dumpster use. The Street Department is responsible for repairing streets, curbs, gutters and maintaining drainage pipes, canals and pumps throughout the city. The Mechanic Department maintains and repairs all city vehicles including Police, Fire, Parks Departments, Sanitation Department, and Street Department vehicles.

#### **Congressional District**

If you do not know your congressional district, click on the Congressional Districts Map below. Then, type your address into the search bar and click Find District. Your congressional district will appear at the top of the page.

Congressional Districts Map

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#### **Congressional District**

Arkansas's 1st Congressional District

#### **Project Manager**

Please provide the following information about the project manager.

#### **Project Manager Contact Information**

Contact

First Name Last Name Amanda Hicks

Title

City Engineer/Public Works Director

Phone Type Number Extension

Business 8707025109

**Email** 

ahicks@citywm.com

Fax

8707327650

**Address** 

#### **Signature**

amanda signature.jpg - 09/26/2019 02:17 PM

Comment

NONE PROVIDED

# Programmatic Capability: Describe any past performance in successfully completing and managing projects similar in size, scope and relevance to the proposed project.

Before becoming City Engineer/Public Works Director, I worked for the city as a Water/Wastewater Engineer with the city-owned utility. While employed there, the Arkansas Department of Health (ADH) had funds available through and insurance company, Delta Dental to rehabilitate fluoride facilities to municipalities throughout Arkansas up to \$27,000.00. I applied for the grant by gathering pricing for materials, labor and equipment to complete the renovation and bring the facility up to ADH standards. The project began in August 2017 and was complete by October 2017, with the utility department being fully refunded for the rehabilitation by \$26, 650.00.

#### Describe other environmentally friendly measures the organization already practices.

The sanitation department participates in recycling and e-waste removal through a grant provided by the East Arkansas Planning and Development District (EAPDD), which is funded through the Arkansas Department of Environmental Quality (ADEQ). The sanitation department provides employees and equipment to transport the recycling and e-waste up to three times a week. Recycling has produced an average of 750 tons per month and e-waste averages about 18 trailers full per month. The citizens of West Memphis are proud to have the recycling program. The sanitation department also provides a biannual community tire clean-up for the residences in West Memphis. Twice a year, usually during the spring and fall, the city will provide workers and equipment to sweep the city and collect residential tires (up to 4 per residence), and properly dispose of the wasted tires. The effort has resulted in an average of 1500 tires per pickup.

# Project Details (1 of 1)

#### Refuse Truck 2002; Replace

Answer the following questions for the vehicle to be replaced or repowered. If you have multiple vehicles being replaced or repowered, click the "Add New Project Details" button at the end of this section for each additional vehicle.

#### **Vehicle Type**

Refuse Truck

#### Describe how, when, and where the vehicle to be replaced/repowered is used.

The current truck will be replaced in the year 2020 with a new CNG fueled vehicle from a dealership with the best quality product. All refuse trucks are stored and maintained at 511 East Jackson, West Memphis, AR 72301.

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#### Select the percentage of time the affected equipment will be operated in Arkansas.

100%

#### **Acronyms**

CNG: Compressed Natural Gas

LPG: Propane EV: All-Electric

LNG: Liquefied Natural Gas

#### **Project Type**

Replace

#### Replace Type

Replace with CNG (including renewable landfill gas)

Select the engine model year of the vehicle to be repowered or replaced. NOTE: The model year must be within the 1992-2009 range. If the selected date falls outside of that range, then the project is not eligible.

2002

#### **Estimated Total Cost**

Please provide estimates for the costs of the project and scrap value of the engine or vehicle to be replaced as indicated in the fields below.

Please provide a dollar value for the following fields without using symbols, such as the dollar sign (\$), periods (.), or commas (,). For example, the dollar value '\$2,000' should be written as '2000'.

This form will automatically calculate the estimated total cost of your project and the maximum potential funding assistance percentage for your project.

Provide the annual miles of the vehicle to be repowered or replaced.

45000

#### **Estimated Invoice Cost of New Equipment (\$)**

241500

Estimated Delivery and/or Transportation Costs of the New Equipment (\$)

1500

Estimated Installation Costs, if applicable (\$)

750

Estimated Scrappage and Disposal Costs (\$)

2500

Other Costs Related Directly to the Project (\$)

0

Explain the other costs.

0

Sales Tax (\$)

24150

Scrap Value (\$)

5750

Estimated Total Cost Per Vehicle (\$)

264650

### **Project Overview**

#### **Project Physical Location**

Please provide the street address and county of the project.

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#### **Project Address**

511 E. Jackson

WEST MEMPHIS, ARKANSAS (AR) 72301

#### County

Crittenden

#### Infrastructure Availability

The city of West Memphis currently has one CNG fueling station.docx - 10/29/2019 10:18 AM

#### Comment

NONE PROVIDED

#### **Total Number of Vehicles**

1

#### **Total Project Cost (\$)**

264650

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

185255

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

185255

#### My Cost Share (\$)

79395

# **Project Milestones**

Project Step	Estimated Date (MM/DD/YY)
Solicit bids in newspaper of statewide circulation	02/10/2020
Bid(s) awarded	03/05/2020
Vehicle replaced/repowered	09/21/2020
Old equipment scrapped	10/01/2020
Final report to ADEQ	10/30/2020

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

If the city is able to obtain grant funding by receiving a MOA and then a formal notification from ADEQ, myself, along with the mechanic superintendent will go over what types of vehicles they are familiar with, what type of tools the shop may have to obtain and contact various vendors to help in the decision making process as to how the specifications will be written for bids. The Finance Director along with the City Treasurer will ensure funding is available in the sanitation budget. Also, the materials needed to prepare the older diesel engine truck will be ordered, preparing it for salvage. Once specifications have been written, I will either put together a bid package with city contracts and publish them or I will go through the Arkansas Municipal procurement process by selecting a procurement agency or state bid list. After bids are collected, the mechanic supervisor and I will inspect each bid to ensure they match the specifications. The bid with the lowest price and confirmed specifications will be brought before City Council for an majority vote to take the matter to the Public Works Committee. The Public Works Committee with a majority vote will approve the best bid, and then the truck can be ordered. The city will fund the cost for the new truck and turn in all paper work to ADEQ according to the process outlined in MOA for reimbursement.

# **Project Benefits**

#### Describe the public benefit of this project.

The cost of compressed natural gas is still cheaper over a year's time than diesel fuel is, this helps using the taxpayer's dollars in a efficient manner. Because CNG burns more clean than diesel-ran engines by leaving less residue from combustion, maintenance intervals will be drastically reduced, meaning less money and time spent on a vehicle being out of commission, saving the taxpayer money. CNG engines are almost ten decibels quieter than diesel ran engines, making refuse trucks not as noticeable in suburban areas, and again benefiting the stakeholder for the city.

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

CNG reduces greenhouse gas emissions (GHG) up to 20% compared to diesel engines, carbon monoxide is reduced up to 80% and produces 45% less hydrocarbons than diesel. Although natural gas does produce greenhouse gases, it is considerably less compared to diesel ran engines. This helps reduce the harmful effects of greenhouse gases to the environment particularly through global warming. The impact of historical warming on economic inequality has increased substantially in the past few decades. There has been growing evidence that the poorer communities are more negatively affected by a changing in climate, either because they lack the resources for climate protection or they tend to reside in warmer regions that are detrimental to both productivity and health. Everyone to some degree is at risk of energy-related exposures, but the burden falls disproportionately on the poor. The city of West Memphis' median income is \$27,399, while the United States median income is \$73,891. The city's population is already at a disadvantage compared to most of the united states, where the median income is double what it is here. West Memphis could use vehicles that ran on cleaner fuel to negate harmful greenhouse gases that are released from our diesel fuel-ran fleet daily, and therefore not add to the emission issues that have plagued this area for years.

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

Over half of the energy produced in the United States comes from the combustion of fossil fuels such as diesel, which results in a steadily increase of carbon monoxide and hydrocarbons into the atmosphere. When carbon monoxide is released into the air, about half of the concentration is taken up by land and ocean. This means that the carbon monoxide will remain in the atmosphere for thousands of years. Carbon monoxide and other greenhouse gases have contributed a radiating force that has resulted in drastic climate change. Climate change will impact human health by changing the distribution of infectious diseases, water scarcity, nutritional changes, food availability, and population displacement. This project would help the city by utilizing alternative fuel sources and possibly changing the city's entire fleet to reduce emissions into the atmosphere. The city of West Memphis is located in Crittenden County and has been in non-attainment in years 2004, 2005, 2006, 2007, 2008, 2009, 2012, 2013, 2014, and 2015 for the entire county. Non-attainment areas are areas that are considered to have air quality worse than the National Ambient Air Quality Standards. Without quality air, many health-sensitive people have trouble doing the day-to-day tasks due to the emissions, leaving many extremely ill. Although the city of West Memphis has a population of only 24,636 people, two major interstates, I-40 and I-55 run through the city. The city is also surrounded by farm land, which can produce emissions that outweigh all other human sources of fine-particle air pollution. One of the main pollutants produced by farming is ammonia. If industrial and transportation emissions go down, most farm-produced ammonia could be removed from earth through rain events through the ozone process. West Memphis would be honored to take on this project and within the next ten years, have a full fleet of sanitation, street department, and utility vehicles that run on an alternative fuel source.

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

Alternative fuel vehicles (AFVs) are vehicles that can be fueled by alternatives to fossil fuels, such as diesel. While AFVs have the potential to slash oil consumption and reduce green house generated (GHG) emissions, a truly sustainable solution will require upgrades in infrastructure throughout all of the city's fleet programs. West Memphis also has a privately owned CNG fueling station inside the city limits, which makes the beginning of this process of switching over to an alternative fuel, such as CNG more tangible. As the city plans to create other departments that will require fleet management, there have been discussions to require all new fleets to conform to the alternative fuel source, CNG. Also, the city will lobby for a nomination of an alternative fuel corridor through the Federal Highway Administration to ensure more alternative fuel sources are available in this area. This will be accomplished by meeting with local governments (cities and counties) and also the state's representatives and senators to address the issue and opportunity for this alternative fuel corridor. The city will also advertise it's innovative and new use of clean fuels through advertisement and public awareness of alternative fuel's future availability in the area.

## **Attachments**

Date	Attachment Name	Context	User
10/29/2019 10:18 AM	The city of West Memphis currently has one CNG fueling station.docx	Attachment	Amanda Hicks
9/26/2019 2:17 PM	amanda signature.jpg	Attachment	Amanda Hicks

# **Internal Data**

Label	Value
Completeness Check	12/01/2019
Application Complete	Yes
Application Scored	
Application Score	

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Label	Value
Application Recommended for Funding	
MOA Excecuted	
Reimbursement Packet Received	
Payment Sent	

# **Status History**

	User	Processing Status
9/26/2019 2:00:33 PM	Amanda Cecilia Hicks	Draft
11/5/2019 9:55:52 AM	Amanda Cecilia Hicks	Submitted

# **A**udit

Event	Event Description	Event By	Event Date
Submission Locked	Submission Locked	Deiona McKnight	12/2/2019 11:12 AM
Submission Unlocked	Submission Unlocked	Deiona McKnight	12/2/2019 11:17 AM

# **Processing Steps**

Step Name	Assigned To/Completed By	Date Completed
Form Submitted	Amanda Cecilia Hicks	11/5/2019 9:55:52 AM
Review Submission (Budget Coordinator)	Deiona McKnight	12/2/2019 11:17:50 AM

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