



**FY 2018 – Round 1  
ACOG CLEAN AIR Grants  
for  
Public Sector Fleets**

**ISSUED OCTOBER 2, 2017**

**Solicitation & Application  
Guidelines Book**

For questions regarding this solicitation, application procedures or guidelines,  
please contact ACOG at (405) 234-2264

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**FY 2018 ROUND 1 SOLICITATION ANNOUNCEMENT  
ASSOCIATION OF CENTRAL OKLAHOMA GOVERNMENTS (ACOG)  
CLEAN AIR GRANTS FOR PUBLIC SECTOR FLEETS**

**PROGRAM POLICIES AND INFORMATION**

**BACKGROUND**

On December 4, 2015, [Fixing America’s Surface Transportation \(FAST\) Act](#) (Pub. L. No. 114-94) was signed into law—the first federal law in over a decade to provide long-term funding certainty for surface transportation infrastructure planning and investment. The FAST Act authorizes \$305 billion over fiscal years 2016 through 2020 for highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, and research, technology, and statistics programs. With the enactment of the FAST Act, states and local governments are now moving forward with critical transportation projects with the confidence that they will have a federal partner over the long term.

The FAST Act continued the CMAQ program to provide a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act.

Statutory citation: FAST Act § 1114; 23 U.S.C. 149.

CMAQ funds must be spent on projects that reduce ozone (O<sub>3</sub>) precursors – volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>); carbon monoxide (CO) or particulate matter (PM) from transportation sources. All projects must conform to established CMAQ guidance (see Federal Highway Administration, “Publication of Final Guidance on the Congestion Mitigation and Air Quality Improvement Program, [FHWA Docket No. FHWA-2006-26383], Federal Register Vol. 73, No. 203, October 20, 2008; pp. 62362–62379). An electronic version of the CMAQ guidance can be accessed at: [http://www.fhwa.dot.gov/environment/air\\_quality/cmaq/policy\\_and\\_guidance/2013\\_guidance/index.cfm](http://www.fhwa.dot.gov/environment/air_quality/cmaq/policy_and_guidance/2013_guidance/index.cfm)

and revised interim guidance at:

[http://www.fhwa.dot.gov/environment/air\\_quality/cmaq/policy\\_and\\_guidance/cmaq13ig.cfm](http://www.fhwa.dot.gov/environment/air_quality/cmaq/policy_and_guidance/cmaq13ig.cfm).

Additional information about FAST Act provisions and programs can be found at:

<http://www.fhwa.dot.gov/fastact>.

## GENERAL INFORMATION

The procedures and guidelines set forth in this announcement apply to the award of CMAQ funds attributed to the Association of Central Oklahoma Governments, the Metropolitan Planning Organization for the Oklahoma City Area Regional Transportation Study (OCARTS) Transportation Management Area, for the purpose of implementing a Public Fleet Conversion Grants program to be administered as a competitive process. The Association of Central Oklahoma Governments' CLEAN AIR Grants for Public Sector Fleets will allow OCARTS member local governments and their public school districts to access CMAQ funds for fleet conversions to clean fuel technologies to include light duty, medium duty and heavy duty alternative fuel vehicles, hybrid and plug-in hybrid vehicles, and alternative fuel vehicle refueling infrastructure.

**This is a reimbursement program.** All applicants must demonstrate an ability to fund and manage activities at the time they are undertaken. Applicants must be able to demonstrate the ability to provide required matching funds as applicable. The applicant(s) must finance the entire project until the project is completed and federal share is released for reimbursement (typically within 60 days of applicant submission of final invoice and substantiating documentation to ACOG). Private sector grantees will receive reimbursement through their public sponsor.

**This is a vehicle replacement program.** Vehicles for which award funds are made available must be replacement vehicles and require the removal of a like diesel or gasoline powered vehicle from the fleet. Fleet size must be reduced or remain the same. ([See Certified Vehicle Replacements](#))

## ELIGIBLE APPLICANTS

1. Oklahoma City Area Regional Transportation Study (OCARTS) local government member entities. Members include the cities of Bethany, Blanchard, Cedar Valley, Choctaw, Cole, Del City, Edmond, Forest Park, Goldsby, Guthrie, Harrah, Jones City, Lexington, Luther, Midwest City, Moore, Mustang, Newcastle, Nichols Hills, Nicoma Park, Noble, Norman, Oklahoma City, Piedmont, Slaughterville, Spencer, Tuttle, The Village, Warr Acres, and Yukon, Oklahoma. Also included are Canadian County, Cleveland County, Logan County, McClain County and Oklahoma County, Oklahoma.
2. OCARTS member public transit fleets
3. Public Trusts and Public Authorities that provide essential services to OCARTS member entities such as electricity providers, refuse, recycling and landfill operations, and water/wastewater utility services.
4. Public colleges and universities, and Oklahoma CareerTech System Technology Centers lying principally within OCARTS boundaries
5. Public school districts lying principally within OCARTS boundaries ([See Attachment I](#)). These districts include the Mustang, Piedmont, and Yukon public schools in Canadian County; Lexington, Little Axe, Moore, Noble, Norman, and Robin Hill public schools in Cleveland County; Tuttle Public

Schools in Grady County; Guthrie Public Schools in Logan County; Blanchard and Newcastle public schools in McClain County; and Bethany, Choctaw-Nicoma Park, Crooked Oak, Crutch, Deer Creek, Edmond, Harrah, Jones, Luther, Mid-Del, Millwood, Oakdale, Putnam City, Oklahoma City, and Western Heights public schools in Oklahoma County.

6. Public-Private Partnerships (PPP): Private sector entities that contract services such as refuse hauling or school transportation or the establishment of alternative fueling station operations and maintenance to eligible OCARTS-area public entities are eligible to apply for funding. However, the project needs a local jurisdiction sponsor willing to submit the application. In a PPP, a private entity's resources replace or supplement local funds in a selected project. PPP's must have a legal, written agreement in place between the local jurisdiction and the private or non-profit entity before a CMAQ-funded project may be implemented. These agreements should be developed under relevant State contract law and should specify the intended use for CMAQ funding; the roles and responsibilities of the participating entities; and how the disposition of land, facilities, and equipment will be carried out should the original terms of the agreement be altered (e.g., due to insolvency, change in ownership, or other changes in the structure of the PPP). It remains the responsibility of the local jurisdiction to apply for funding and to oversee and protect the investment of CMAQ funds in the (PPP).

Public funds should not be invested where a strong public benefit cannot be demonstrated. Consequently, CMAQ funds must be devoted only to PPPs that benefit the general public by clearly reducing emissions, not for financing marginal projects.

Sharing of total project costs, both capital and operating, is a critical element of a successful public-private venture, particularly if the private entity is expected to realize profits as part of the joint venture.

## PROJECT PERIOD

The estimated project period for awards resulting from this solicitation will **begin in February 2018** with an expected project **completion date no later than October 2019**.

## PROJECT CATEGORIES

For the purposes of this CMAQ-funded grant opportunity, and in keeping with current federal guidelines as outlined in the CMAQ Final Program Guidance published by the Federal Highway Administration in Federal Register Vol. 73, No. 203, Monday, October 20, 2008, funds may be awarded in the following eligible categories:

- A. Alternative Fuel Infrastructure
- B. Light Duty and Heavy Duty Dedicated Alternative Fuel Vehicles (AFVs)
- C. Light Duty and Heavy Duty Hybrid and Plug-in Hybrid Vehicles
- D. Dedicated Alternative Fuel Commercial Mowing Equipment

## NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REQUIREMENTS

All CMAQ funded projects must meet [National Environmental Policy Act \(42 U.S.C. Sec. 4321 - 4347\)](#) requirements and satisfy the basic eligibility requirements under [Title 23](#) and [Title 49](#) of the United States Code. Projects funded under this announcement are subject to NEPA review.

**Liquid and gaseous fuel infrastructure installations:** The timeframe for the performance of environmental assessments for liquid and gaseous fueling infrastructure can take six months or more. Therefore in order to expedite the state and federal review process, **applicants must submit a preliminary environmental assessment with liquid and gaseous fuel infrastructure project applications.**

**Electric Vehicle Supply Equipment (EVSE) also known as electric vehicle charging infrastructure, and vehicle replacement projects:** Ordinarily, EVSE infrastructure projects and vehicle replacement projects qualify as Categorical Exclusions (CE) under the NEPA process. For these types of projects, the timeframe for completion of an environmental review prior to final recommendations for grant awards under this solicitation is estimated to be 30 days. **ACOG will submit projects in the EVSE infrastructure and vehicle replacement categories to the Oklahoma Department of Transportation for a CE ruling.**

## DESCRIPTION OF ELIGIBLE PROJECTS

### A. Alternative Fuel Infrastructure Projects:

These projects will establish fueling facilities and other infrastructure needed to fuel or recharge alternative fuel vehicles. If the proposal supports a billing system, it must be a universal card billing system.

For the purposes of this CMAQ-funded grant opportunity, eligible alternative fuel infrastructure is limited to projects that relate to the storage and dispensing of

1. **Compressed natural gas (CNG) and Liquefied natural gas (LNG)**
2. **Liquefied petroleum gas (LPG, propane)**
3. **Electricity – Alternating Current (AC) or Direct Current (DC) Electric Vehicle Supply Equipment (EVSE)**

**Important Note:** This category is limited to projects installed at existing fueling facilities or fleet yards except in the case of EVSE which is limited to installation at existing parking facilities such as fleet yards, parking garages, parking lots, and on-street parking locations.

All equipment purchased and installed with ACOG CLEAN AIR Grants funding must be new. Used and/or refurbished equipment is not eligible for funding.

It is neither the intent of ACOG nor this CLEAN AIR Grants solicitation to fund alternative fuel infrastructure projects to compete with private enterprise. Therefore, public-private partnership

infrastructure projects that include installation and operation by established private sector entities are encouraged.

All alternative fuel infrastructure projects must fall into one of the following three categories or a combination thereof, and in the case of electric vehicle recharging and CNG, must meet or better the specified capacities.

**1. High Capacity Public and/or Private Access Infrastructure**

- a. For projects involving electric vehicle recharging, required minimum capacity: DC quick charge station capable of recharging a battery electric passenger car from 20 percent empty to 80 percent full in less than 30 minutes, using high power output of 96 kilowatts (480 Volts DC, 200 Amps).
- b. For projects involving CNG, required minimum capacity: two (2) dispensers with two (2) hoses each; 400 scfm (standard cubic feet per minute) compressor(s) output; 30,000 scf to 60,000 scf storage volume; 5,500 psig storage capacity and 3600 psig fill capacity

**2. Medium Capacity Public and/or Private Access Infrastructure**

- a. For projects involving electric vehicle recharging, required minimum capacity: AC Level 2 charge station capable of recharging a battery electric passenger car from “empty” to “full” in six (6) to seven (7) hours using maximum power output of 3.3kW (240V output at 32A).
- b. For projects involving CNG, required minimum capacity: one (1) dispenser with two (2) hoses; 200 scfm (standard cubic feet per minute) compressor(s) output; 30,000 scf storage volume; 5,500 psig storage capacity and 3600 psig fill capacity

**3. Time-Fill Private Access Fleet Facility Infrastructure**

- a. For projects involving CNG, required minimum time-fill capacity: 25 - 50 scfm (standard cubic feet per minute) compressor. Optional “quick-fill” storage capacities as listed:

*Note: A 25 scfm compressor is equivalent to an Ingersoll Rand Simplex Unit and a 50 scfm compressor is equal to an Ingersoll Rand Duplex unit. 25 scfm will slow fill approximately 100 GGEs in 8 hours or 10 vehicles requiring 10 gallons each.*

- i. Fleets with 5-9 fleet vehicles, minimum “quick fill” storage capacity 10,000 scf and 25 scfm compressor
- ii. Fleets with 10-15 light duty vehicles, minimum “quick fill” storage capacity 20,000 scf and 25-50 scfm compressor
- iii. Fleets with more than 15 light duty vehicles, minimum “quick fill” storage capacity 30,000 scf and 50 scfm compressor



## **B. Light Duty and Heavy Duty Dedicated Alternative Fuel Vehicles (AFVs)**

These projects will purchase public-sector and/or certain private-sector owned (see Public Private Partnerships under Eligible Applicants section) Original Equipment Manufacturer (OEM) dedicated alternative fuel vehicles that run exclusively on compressed natural gas (CNG), liquefied propane gas (LPG), or electricity (battery electric vehicles – BEV) including passenger vehicles and vans, refuse trucks, street cleaners, school buses, airport shuttles, law enforcement vehicles, and others.

Costs associated with upfitting new purchase, CNG/LPG gaseous engine prepped, current Model Year or newer vehicles to run exclusively on CNG or LPG are eligible.

Conversions of existing-fleet conventional fuel vehicles to CNG or LPG are not eligible and will not be considered. Conversions of conventional fuel vehicles, whether new purchase or existing fleet vehicles, to BEV are not eligible.

Dedicated OEM alternative fuel off-road equipment projects such as propane or compressed natural gas commercial mowers are also allowable under this solicitation (see D. Dedicated Alternative Fuel Commercial/Industrial Mowing Equipment under this Section).

Only dedicated alternative fuel vehicles are eligible for funding. Additionally, all vehicles and equipment purchased with ACOG CLEAN AIR Grants funding or used as project funding match must be new. Used and/or refurbished equipment or existing fleet vehicles are not eligible for funding.

No project vehicles may be purchased, ordered, or received prior to receiving an award notification and Notice to Proceed from ACOG under this solicitation.

Alternative fuel vehicles must be capable of being fueled solely by one of the alternative fuels identified in section 301 of the 1992 Energy Policy Act. ([See the U.S. Dept. of Energy Alternative Fuels Data Center](#))

**Note:** Flexible-fuel vehicles, dual-fuel or bi-fuel vehicles are NOT eligible for funding. Also, certain electric vehicles such as golf carts, low-speed electric vehicles, three wheel electric vehicles, electric bicycles and motorcycles, and electric vehicles that are not manufactured for highway speeds and do not meet Federal Motor Vehicle Safety Standards for passenger cars and trucks are NOT eligible for funding.

## **C. Light Duty and Heavy Duty Hybrid and Plug-in Hybrid Vehicles**

These projects will purchase public-sector and/or certain private-sector owned (see Public Private Partnerships under Eligible Applicants section) Original Equipment Manufacturer (OEM) hybrid electric vehicles (HEV) and plug-in hybrid electric vehicles (PHEV). These vehicles may include passenger vehicles and vans, refuse trucks, street cleaners, school buses, airport shuttles, law enforcement vehicles, and others.

Conversions of conventional fuel vehicles, whether new purchase or existing fleet vehicles, to HEV or PHEV are not eligible projects.

No project vehicles may be purchased, ordered, or received prior to receiving an award notification and Notice to Proceed from ACOG under this solicitation.

Dedicated OEM alternative fuel off-road equipment projects such as propane or compressed natural gas commercial mowers are also allowable under this solicitation.

Only dedicated alternative fuel vehicles are eligible for funding. Additionally, all vehicles and equipment purchased with ACOG CLEAN AIR Grants funding must be new. Used and/or refurbished equipment is not eligible for funding.

### **Additional Hybrid Vehicles and Hybrid Trucks: Eligibility Information**

Although not defined by the Energy Policy Act of 1992 as alternative fuel vehicles, certain hybrid vehicles that have lower emissions rates than their non-hybrid counterparts may be eligible for CMAQ funding. Hybrid passenger vehicles must meet low emissions and energy efficiency requirements set by EPA that would qualify them to travel as single-occupant vehicles in High Occupancy Vehicle lanes in states that have HOV lanes. To be eligible for CMAQ funding, hybrid vehicles must meet Tier 2 emissions standards and fall within Bins 5, 4, 3, 2, or 1).

A list of Model Year 2016 Alternative Fuel and Advanced Technology Vehicles including HEVs and PHEVs can be found in the [U.S. Department of Energy's Alternative Fuels Data Center Publications](#). Additional Bin classification information can be found under the U.S. Environmental Protection Agency and U.S. Department of Energy [FuelEconomy.gov](#) website by accessing the Find a Car menu, then using the Compare Side-by-Side application, and then clicking the Energy and Environment tab - EPA Smog Ratings for the vehicles being compared. Also, EPA's most current list of qualifying light duty hybrid vehicles meeting the required emissions standards can be found on EPA's Transportation and Air Quality web pages under [Cars and Light Trucks High Occupancy Vehicle Exemption Proposed Rule](#).

1. Projects involving **heavy-duty hybrid vehicles**, including refuse haulers, street sweepers, and other trucks also may be appropriate for program support. Eligibility will be based on a comparison of the emissions projections of these larger candidate vehicles and other comparable models.
2. As used in this solicitation, the term **hybrid vehicle** includes **hybrid-electric vehicles, and plug-in hybrid vehicles**. Hybrid vehicles are not required to have alternative fuel capacity.

### **D. Dedicated Alternative Fuel Commercial/Industrial Mowing Equipment**

Dedicated OEM alternative fuel commercial/industrial mowing equipment is allowable under this solicitation.

Only dedicated OEM mowing equipment fueled exclusively by propane, compressed natural gas, or battery powered electricity is eligible for funding in this category. Additionally, all equipment purchased with ACOG CLEAN AIR Grants funding must be new. Used and/or refurbished equipment is not eligible for funding.

## CERTIFIED VEHICLE REPLACEMENTS

**Light Duty Vehicles** – defined and classified as passenger vehicles or as Class 1 and Class 2 trucks with Gross Vehicle Weight Ratings (GVWR) of  $\leq 10,000$  lbs. – can only be replaced with light duty vehicles and cannot be replaced with heavy duty vehicles.

Light duty gasoline and diesel vehicles may be replaced with new, current Model Year (MY) or newer alternative fuel vehicles, or hybrids and plug-in hybrids meeting current applicable Tier 2, Bin 5 through Bin 1, EPA emissions limits.

**Heavy Duty Vehicles\*** – defined as Classes 3 through 8 trucks with Gross Vehicle Weight Ratings (GVWR) of  $\geq 10,001$  lbs. – can be replaced with either light duty vehicles or heavy duty vehicles.

**\*Important Heavy Duty Vehicle Replacement Note:** The weight class of a heavy duty replacement vehicle may not be greater than the weight class of the vehicle being replaced. (Example: A Class 6 truck with a GVWR of 19,501 lbs. – 26,000 lbs. can be replaced with a Class 1 – 6 truck but cannot be replaced with a Class 7 truck because a Class 7 truck has a GVWR of 26,001 – 33,000 lbs.) See [APPENDIX B](#) for truck types and weight classifications.

Heavy duty gasoline and diesel vehicles may be replaced with new, current MY or newer certified alternative fuel vehicles, or hybrid and plug-in hybrids meeting the 2010 EPA emissions standards for heavy duty engines.

**EPA Emissions Standards Certification Requirement Note:** An EPA-issued Emissions Standards Certificate of Conformity must be provided to ACOG with project invoicing for gaseous fuel vehicle projects (CNG and LPG) for vehicles other than Original Equipment Manufacturer vehicles or vehicles originally equipped with OEM natural gas engines such as the Cummins ISL-G series engines, or vehicles equipped with factory-installed, gaseous engine prep packages and purchased through the State of Oklahoma Statewide Fleet Contract.

## REMOVAL OF VEHICLES FROM FLEET

Vehicles eligible for replacement include:

- **Heavy Duty** – gasoline or diesel vehicles (GVWR  $\geq 10,001$  lbs.; Class 3, 4, 5, 6, 7, 8 trucks)
- **Light Duty** – gasoline or diesel vehicles (GVWR  $\leq 10,000$  lbs. passenger vehicles and Class 1-2 trucks)
- **Commercial/Industrial Mowing Equipment** –, gasoline or diesel commercial/industrial mowers

**All vehicles identified for replacement must be in regular fleet service at the time of replacement. Vehicles that are no longer in regular weekly fleet service or that are being used for spare parts are not eligible for replacement using CMAQ-funds.**

**Note:** Documentation of removal from fleet of all vehicles and mowing equipment must be provided to ACOG. Acceptable methods of removal of vehicles and equipment are sale for scrap, trade-in, or auction.

## BUDGET DOCUMENTATION

Supporting documentation for both infrastructure project budgets and vehicle replacement project budgets will consist of current **itemized** price quotes from vendors/contractors and any other pertinent documents that help illustrate the project costs.

To be considered for funding, itemized price quotes for vehicles **must make clear the incremental cost** for the dedicated alternative fuel vehicle and/or hybrid vehicles. In some cases this may need to be accomplished by providing a price quote for the alternative fuel vehicle or hybrid vehicle and its identically equipped conventional fuel counterpart. In all cases, the incremental difference must be declared and supported by documentation. State contract base prices for conventional fuel vehicles and their alternative fuel counterparts may be substituted where appropriate for itemized price quotes.

**Note:** Some gaseous fuel vehicle options listed on the State Contract may require a model change. ACOG CLEAN AIR Grants for Public Fleets cover only a vehicle's CNG, LNG, or LPG engine and fuel system cost differential (incremental difference). They do not cover any portion of the price differential associated with a model change. Additionally, applicants are cautioned to pay particular attention to the GVWR class of vehicles being retired and vehicles being purchased as in some cases a required model change to accommodate a gaseous fuel engine and fuel system, affects the GVWR class into which the vehicle falls.

## COST SHARING REQUIREMENTS

### **Alternative Fuel Infrastructure Projects:**

Eligible projects may be funded at a ratio of up to 80 percent federal funds and 20 percent local funds for installation costs and capital investments\* in alternative fuel refueling/recharging infrastructure.

Eligible local governments and school districts may apply only for CLEAN AIR Public Fleet Grants funding for which local match funds have been identified. Other federal grant funding or funds of federal origin cannot be utilized as matching funds. Additionally, if other awards, incentives, rebates, transferred tax credits or pass-through incentives will be utilized in a project, that amount of financial assistance and its purpose must be disclosed.

Eligible public-private partnership (PPP) infrastructure projects may be funded at the same ratio as public sector projects. All applicable federal and state incentives that will accrue to the private sector entity and/or any federal or state credits that may be partially or wholly transferred to the public sector entity must be disclosed.

\* For the purposes of this CMAQ funded grant opportunity, **capital investments** are defined as Level 2, and DC quick charge Electric Vehicle Supply Equipment (EVSE) directly related to charging electric batteries in highway-speed, plug-in electric vehicles and to metering electric vehicle fuel usage (in kWh); or equipment directly related to the compression of natural gas, and equipment directly related to the storage, dispensing and metering of compressed natural gas (CNG), or liquefied propane gas (LPG) into a motor vehicle. Capital investments exclude real estate and site development.

**Alternative Fuel Vehicle Projects [dedicated AFVs and hybrid and plug-in hybrid vehicles]:**

Eligible project expenditures for reimbursement are limited to the “incremental cost” of new vehicle(s) purchases. The new vehicle purchase price minus the incremental or conversion cost may serve as the local share with the incremental or conversion cost serving as the federal share. Project vehicles may not be existing fleet vehicles and no project vehicles may be purchased, ordered, or received prior to receiving an award notification and Notice to Proceed from ACOG under this solicitation.

In no instance will the local share be less than 20 percent of the total project cost for each of the following project areas:

**Light Duty Dedicated Alternative Fuel Vehicles, Hybrid and Plug-in Hybrid Vehicles** ( $\leq 10,000$  lbs. GVWR passenger vehicles or Class 1 and Class 2 truck classification\*)

and

**Heavy Duty Dedicated Alternative Fuel Vehicles, Hybrid and Plug-in Hybrid Vehicles** ( $\geq 10,001$  lbs. GVWR or Class 3 - 8 truck classification\*)

and

**Dedicated Alternative Fuel Commercial/Industrial Mowing Equipment** fueled exclusively by propane, compressed natural gas, or battery powered electricity

Eligible local governments and school districts may apply only for CLEAN AIR Public Fleet Grants funding for which local match funds have been identified. Additionally, if other awards, incentives, rebates, transferred tax credits or pass-through incentives will be utilized in a project, that amount of financial assistance and its purpose must be disclosed.

Eligible public-private partnership (PPP) alternative fuel vehicle projects are also limited to the incremental cost of new vehicle(s) purchases. The remainder of the new vehicle cost may serve as the local share. In no instance will the local share be less than 20 percent of the total project cost. In addition, all applicable incentives, rebates and tax credits that will accrue to the private sector entity and/or that may partially or wholly transfer to the public sector entity must be disclosed.

\* See [APPENDIX B](#) for truck types and weight classifications.

## **LIMITATIONS ON FUNDS**

ACOG reserves the right to negotiate the amount of grant awards; however, the maximum amount of funding available under the 2017 ACOG CLEAN AIR Grants for Public Sector Fleets Solicitation is **\$350,000**.

Eligible local governments and school districts may apply only for FY 2018 ACOG CLEAN AIR Grants funding for which local match funds have been identified. Proposals must include a detailed budget which includes matching amount and the source of matching funds, e.g., capital improvement sales tax, general fund, etc.

Other federal grant funding or funds of federal origin cannot be utilized as matching funds. Additionally, if other awards, incentives, rebates, transferred tax credit or pass-through incentives will be utilized in a

project, that amount of financial assistance and its purpose must be disclosed by the applicant in the project funding assistance request.

## PROJECT TIMELINE

All awarded projects under Round 1 of the FY 2018 ACOG CLEAN AIR Public Fleet Grants Solicitation must be completed and invoices with backup documentation must be received by ACOG no later than close of business, October 25, 2019.

## EVALUATION & PROJECT SCORING

Projects will be evaluated and scored according to the following criteria:

1. Overall Project Emissions Benefits
2. Project Cost Effectiveness
3. Number of Clean Fuel Technology Replacement Vehicles (Double points if replacing light-duty vehicles with model years prior to 2008 and heavy-duty vehicle model years prior to 2006).
4. New Project Alternative fuel Refueling or Recharging Infrastructure – Capacity
5. Existing Alternative Fuel Refueling or Recharging Infrastructure – Access
6. Project Viability and Adherence to Guidelines
  - ★ Three (3) bonus points are available for each vehicle will be equipped with idle reduction technology (auxillary power units, automatic power management systems, etc)
  - ★ One (1) bonus point is available for each vehicle equipped with telematics and/or GPS
  - ★ One (1) bonus point is available for each vehicle if applicant has a written and current fleet idle reduction policy

**Emissions Benefit Calculations:** Overall Project Emissions Benefits and Project Cost Effectiveness will be calculated using the Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool developed by the Argonne National Laboratory. Benefits will be determined in the model between the alternative fuel and/or hybrid replacement vehicle(s) vs. a gasoline/diesel engine using annual vehicle mileage and fuel economy inputs.

The tool can be downloaded at:

<https://greet.es.anl.gov/files/afleet-tool>

### What is AFLEET Tool?

The Department of Energy's Clean Cities Program has enlisted the expertise of Argonne develop a tool to examine both the environmental and economic costs and benefits of alternative fuel and advanced vehicles. Argonne has developed the **Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool** for Clean Cities stakeholders to estimate petroleum use, greenhouse gas emissions, air pollutant emissions, and cost of ownership of light-duty and heavy-duty vehicles using simple spreadsheet inputs.

The tool uses data from Argonne's **Greenhouse gases, Regulated Emissions, and Energy use in Transportation (GREET)** fuel-cycle model to generate necessary well-to-wheels petroleum use and GHG emission co-efficients for key fuel production pathways and vehicle types. In addition, Environmental Protection Agency's **MOtorVehicle Emission Simulator (MOVES)** and certification data are used to estimate tailpipe air pollutant emissions.

Infrastructure project emissions benefits and cost effectiveness will be calculated using the number of light duty and heavy duty of fleet vehicles that will be refueling/recharging at the facility, weekly fuel use and the project's [capital investments as defined under Cost Sharing Requirements](#).

Each project will be evaluated by determining how well the project rates on each of the applicable criteria. Scoring details and definitions are delineated in [Attachment II](#).

## ADDITIONAL INFORMATION

A Glossary of Terms and Acronyms as used in this document is attached as [APPENDIX A](#). A list of additional resources regarding alternative fuels and vehicles is attached as [APPENDIX C](#).

## ADDITIONAL PROJECT REQUIREMENTS

Projects requesting funding for the conversion and/or purchase of Alternative Fuel Vehicles or Hybrid Vehicles must meet the following additional eligibility requirements:

1. Project proposals must demonstrate a reduction in volatile organic compounds and/or nitrogen oxides.
2. Grantees must visibly and distinctly label all ACOG CLEAN AIR Grant-funded vehicles with the following: **CLEAN AIR Vehicle funded in partnership with ACOG or CLEAN AIR Vehicle funded in partnership with the Association of Central Oklahoma Governments**). It is encouraged that vehicles be marked in such a way that promotes the grantee's clean fuel and clean air commitment via distinctive wraps, logos, etc.
3. Grantees must visibly and distinctly label all ACOG CLEAN AIR Grant-funded infrastructure projects with the following: **CLEAN AIR Fueling Project (or CLEAN AIR Fueling Facility) funded in partnership with the Association of Central Oklahoma Governments**. It is encouraged that projects be marked in such a way that promotes the grantee's clean fuel and clean air commitment via signage, distinctive wraps, logos, etc.
4. Grantees will maintain odometer readings, fuel consumption records, maintenance records, and written documentation of all other costs associated with the vehicle(s) for a period of five years. The grantee will provide those records to the Association of Central Oklahoma Governments annually for a period of five (5) years as is required by the U.S. Office of Management and Budget (OMB).

## 2018 ACOG CLEAN AIR PUBLIC FLEET GRANTS SCHEDULE

Distribution of ACOG CLEAN AIR Public Fleet Grants Applications.....	<b>October 3, 2016</b>
Application Submission Deadline.....	<b>4:00 p.m.; November 17, 2017</b>
Application Reviews.....	<b>November/December 2016</b>
Intermodal Transportation Technical Committee recommendations.....	<b>January 11, 2018</b>
Intermodal Transportation Policy Committee award approvals.....	<b>January 26, 2018</b>
Approved projects sent to Oklahoma Dept. of Transportation (NEPA review).....	<b>January 26, 2018</b>
Award Notifications emailed & Award Contracts distributed for signatures.....	<b>January 26, 2018</b>
Notices to proceed distributed.....	<b>February 2018</b>

**IMPORTANT:**

**Costs incurred by the CMAQ project sponsor prior to the issuance of a Notice to Proceed by ACOG will not be reimbursed. A funding award notification from ACOG should not be construed as Notice to Proceed. CMAQ project sponsors should work closely with ACOG to ensure that all work activities for which reimbursement will be sought are pre-approved.**





**ROUND 1**

**FY 2018  
ACOG CLEAN AIR GRANTS  
for  
PUBLIC SECTOR FLEETS**

**ATTACHMENTS**



## ATTACHMENT II - SCORING GUIDE

### CRITERIA SCORING GUIDE

- 1. Overall Project Emissions Benefits** Projects will be ranked based on calculated criteria pollutant emission credits for Carbon Monoxide (CO), Volatile Organic Compounds (VOCs), Nitrogen Oxides (NOx), and fine Particulate Matter (PM 2.5). Projects will receive one (1) point per 100 lbs. of criteria emissions reduced, rounded to nearest whole e.g., project with 1762.3 lbs. annual credits would receive 17.623 points rounded to the nearest whole = 18 points).
- 2. Project Cost Effectiveness** Projects will be ranked based on calculated cost per pound of pollutant credit.
- 3. Clean Fuel Technology Replacement Vehicles\*** Three (3) points will be given for each heavy duty vehicle (Truck Class 3 – 8), double points for model year 2006 or older vehicles; two (2) points will be given for each light duty vehicle (passenger vehicles and Truck Class 1 – 2), double points for model year 2008 or older; and one (1) point for each commercial/industrial mower to be purchased as the result of a grant award. A variety of excellent vehicle information resources are listed and linked in [APPENDIX C](#).

\*Note: Weight class and GVWR of replacement vehicles may not be greater than the weight class and GVWR of the vehicles being replaced. See [APPENDIX B](#) for truck types and weight classifications.

- 4. New Project Alternative Fuel Vehicle Refueling/Recharging Capacity** Thirty (30) points will be given for High Capacity projects; 20 points will be given for Medium Capacity projects; and Time-Fill projects will receive one (1) point per vehicle capacity (i.e. 10 slow-fill posts with dual hoses have a 20 vehicle simultaneous fueling capacity and would receive 20 points).
- 5. Existing Alternative Fuel Refueling/Recharging Infrastructure Access** – Points are awarded for station capacity and proximity to fleet. High capacity stations will receive 25 points, if onsite, with one point subtracted for each 0.1 mile distance from fleet yard to offsite refueling/recharging. On-site Level 2 recharging, and on-site CNG slow-fill will receive 15 points; and medium capacity CNG and LPG refueling stations will receive 10 points, if onsite, with 0.5 points subtracted for each 0.1 mile distance if off-site.
- 6. Project Viability and Adherence to Guidelines** – One (1) to three (3) points each will be awarded based on history, if any, of applicant’s previous projects funded under ACOG’s CLEAN AIR Grants Program, compliance with previous contract terms, ability to complete the project on time, and adherence to guidelines delineated within this solicitation.

For first-time applicants with no prior ACOG’s CLEAN AIR Grants projects history, one (1) to six (6) points each will be awarded based on the likelihood that a proposed project can be completed within this solicitation’s defined [project timeline](#), and adherence to guidelines delineated within this solicitation.

**BONUS POINTS** – Three (3) bonus points are available for each vehicle will be equipped with idle reduction technology (auxillary power units, automatic power management systems, etc). One (1) bonus point is available for each vehicle equipped with telematics and/or GPS. One (1) bonus point is available for each vehicle if applicant has a written and current fleet idle reduction policy.

## ATTACHMENT III - GUIDE TO ONLINE APPLICATION & DOCUMENT UPLOADS

**Please Read:** The following question and documentation requirements are provided here as guidance prior to starting the online application. This attachment is not the application and will not be accepted as such. All applications with required documentation uploads must be completed via the [online application survey form](#).

### Section 1 – Instructions for ACOG CLEAN AIR Grants for Public Sector Fleets Application Submission

1. All applications must be submitted online and received by ACOG no later than 4:00 p.m., November 17, 2017
2. Award contracts will be distributed on or about January 26, 2018

**Important Note:** Applications must be received by the deadline. Incomplete applications will not be considered and may not be resubmitted until the next funding round.

Submitting an application does not guarantee funding will be awarded. The applicant must be awarded funding via an executed agreement with ACOG. Without a fully executed agreement in place, the applicant assumes all costs for any purchases, installations, or financial obligation of any kind associated with the project.

For questions and/or comments regarding grant procedures, please contact ACOG at (405) 234-2264.

### Section 2 – Applicant Information (fill in the blanks)

### Section 3 – Project Information (check all categories that apply)

### Section 4 – Alternative Fuel Infrastructure Project Description

*Complete Section 4, Section 5, and Section 6, if applying for funds for fueling infrastructure*

Briefly describe your project (limit 300 words). Information sought includes:

- Number of EVSE (electric vehicle supply equipment) to be purchased and installed; single-port or dual-port; DC quick charge or AC Level 2 capacity; public access, private access, or both
- Number CNG or LPG dispensers to be purchased and installed; single-hose or dual-hose; high capacity or medium capacity; public access, private access, or both
- Number of time-fill posts to be purchased and installed; single-hose or dual-hose
- Indicate where infrastructure project is to be located
- Indicate if you have state certified compressor technicians on staff or if maintenance will be outsourced

## National Environmental Policy Act (NEPA) Requirements

**Preliminary Environmental Assessment File Upload (PDF format):** Required for all CNG and LPG fueling infrastructure projects. Name this file FY2017 ApplicantEntityName\_NEPA.pdf

### Section 5 – Infrastructure Project Impact

*Complete Section 4, Section 5, and Section 6, if applying for funds for fueling infrastructure*

- How many light duty (see definition in Guidebook Glossary) alternative fuel vehicles in your fleet will fuel at this station each week? If multiple fuels are being installed, indicate number of light duty vehicles in your fleet of each fuel type will be fueling at the station.
- How many miles on average do these alternative fuel light duty vehicles drive per day on average?
- How many days per week are these light duty alternative fuel vehicles driven on average?
- How many heavy duty (see definition in Guidebook Glossary) alternative fuel vehicles in your fleet will fuel at this station each week? If multiple fuels are being installed, indicate number of heavy duty vehicles in your fleet of each fuel type will be fueling at the station.
- How many miles do these alternative fuel heavy duty vehicles in your fleet drive per day on average?
- How many days per week are these heavy duty alternative fuel vehicles driven on average?
- Is this project a Public Private Partnership (PPP)? \_\_\_Yes \_\_\_No  
If yes, please describe the PPP and agency roles in this project (limit 150 words).

### Section 6 – Fueling Infrastructure Project Budget and Budget Justification

*Complete Section 4, Section 5, and Section 6, if applying for funds for fueling infrastructure*

- **Alternative Fuel Infrastructure Budget (provided) File Upload (PDF format):** Name this file FY2017 ApplicantEntityName\_StationBudget.pdf.
- **Alternative Fuel Infrastructure Budget Support Documentation File Upload (PDF format):** This file should consist of current itemized price quotes from vendors and/or contractors, and any other pertinent documents supporting the infrastructure project budget. Name this file FY2017 ApplicantEntityName\_StationBudgetSupport.pdf

### Section 7 – Vehicle Project Description

*Complete Section 7, Section 8, and Section 9, if applying for funds for the incremental cost of vehicles*

Briefly describe your project (limit 200 words). Information sought includes:

- Number, fuel type and weight classification of vehicles for which funding is being requested (e.g. 3 light duty LPG pickup trucks, 2 heavy duty CNG refuse haulers, and 1 heavy duty gasoline hybrid bucket truck)
- How vehicles will be used (e.g. 2 refuse haulers will be used by Solid Waste Management Division on daily routes, 3 light duty pickups will be used by Utilities Department in Line Maintenance operations; 1 heavy duty bucket truck will be used by Parks Department maintenance crews.
- Indicate if you have state certified alternative fuel technicians on staff or if maintenance will be outsourced.

**Note:** Please review CERTIFIED VEHICLE REPLACEMENTS AND REMOVING VEHICLES FROM FLEET sections in FY 2018 – Round 1 Solicitation & Guidelines Book prior to completing the Vehicle Retirement and Replacement Tables file.

- **Vehicle Retirement and Replacement Tables (provided) File Upload (PDF format):** Name this file FY2018 ApplicantEntityName\_R&R Tables.pdf

## Section 8 – Vehicle Project Impact

*Complete Section 7, Section 8, and Section 9, if applying for funds for the incremental cost of vehicles*

- Do you have on-site existing fueling facilities for
  - CNG
  - LNG
  - BEV or PHEV charging
  - None
- If None, where will vehicles be refueled/recharged?
- What is the distance from the project location (where vehicles are normally housed) in tenths of miles (e.g. 1.8 miles) to the off-site refueling/recharging fueling station?

## Section 9 – Vehicle Project Budget and Budget Justification

*Complete Section 7, Section 8, and Section 9, if applying for funds for the incremental cost of vehicles*

Vehicle budget support documentation will consist of current itemized price quotes from vendors/contractors and any other pertinent documents that help illustrate the project costs.

To be considered for funding, itemized price quotes for vehicles must make clear the incremental cost for the dedicated alternative fuel vehicle and/or hybrid vehicles. In some cases this may need to be accomplished by providing a price quote for the alternative fuel vehicle or hybrid vehicle and its identically equipped conventional fuel counterpart. In all cases, the incremental difference must be declared and supported by documentation. State contract base prices for conventional fuel vehicles and their alternative fuel counterparts may be substituted where appropriate for itemized price quotes.

### **Important Note:**

Some gaseous fuel vehicle options listed on the State Contract may require a model change. ACOG CLEAN AIR Grants for Public Fleets cover only a vehicle’s CNG, LNG, or LPG engine and fuel system cost differential (incremental difference). They do not cover any portion of the price differential associated with a model change. Additionally, applicants are cautioned to pay particular attention to the GVWR class of vehicles being retired and vehicles being purchased as in some cases a required model change to accommodate a gaseous fuel engine and fuel system, affects the GVWR class into which the vehicle falls.

- **Dedicated Alternative Fuel and Hybrid Vehicles Budget (provided) File Upload (PDF format):** Name this file FY2018 ApplicantEntityName\_VehicleBudget.pdf
- **Dedicated Alternative Fuel and Hybrid Vehicles Budget Support Documentation File Upload (PDF format):** Name this file FY2018 ApplicantEntityName\_VehicleBudgetSupport.pdf.

## Section 10 – Project Assurances and Resolutions

- **Assurances and Resolutions (Word documents provided) File Upload (PDF format):** Name this file FY2017 ApplicaEntityName\_Assurances&Resolutions.pdf
- Is the applicant entity a current, active member of ACOG's Central Oklahoma Clean Cities Coalition? (Check Yes or No)





**ROUND 1**

**FY 2018**

**ACOG CLEAN AIR GRANTS**

**for**

**PUBLIC SECTOR FLEETS**

**APPENDICES & RESOURCES**

# APPENDIX A - GLOSSARY

## GLOSSARY OF TERMS AND ACRONYMS

TERM	DEFINITION
AFV or Alternative Fuel Vehicle	A vehicle originally manufactured or converted to run on alternative fuels.
Alternative Fuels (as defined by EPAAct)	<ul style="list-style-type: none"> <li>• Methanol, ethanol, and other alcohols</li> <li>• Blends of 85% or more of alcohol with gasoline</li> <li>• Natural gas and liquid fuels domestically produced from natural gas</li> <li>• Liquefied petroleum gas (propane)</li> <li>• Coal-derived liquid fuels</li> <li>• Hydrogen</li> <li>• Electricity</li> <li>• Biodiesel (B100)</li> <li>• Fuels (other than alcohol) derived from biological materials</li> <li>• P-Series</li> </ul>
Bi-Fuel Vehicle	A vehicle with two separate fuel systems that operates on either fuel (e.g., a bi-fuel gasoline/propane vehicle can operate on either gasoline or propane). Each fuel is stored in a separate tank.
California Air Resources Board (CARB)	California’s lead air quality agency, consisting of a nine-member Governor-appointed board. It is responsible for attainment and maintenance of the state and federal air quality standards, and is fully responsible for motor vehicle pollution control. It oversees county and regional air pollution management programs.
CARB Certification	New motor vehicles and engines and vehicle conversions must be certified by the California Air Resources Board (CARB) for emission compliance before they are legal for sale, use, or registration in California. Certification is granted annually to individual engine families and is good for one model year.
Clean Alternative Fuel Conversion Manufacturer (or Conversion Manufacturer, or Converter)	Any person that manufactures, assembles, sells, imports, or installs a motor vehicle or engine fuel conversion for the purpose of use of a clean alternative fuel.
Clean Fuel Technology	Alternative Fuel Vehicles, Hybrid Electric Vehicles and Plug-in Hybrid Vehicles and/or the infrastructure necessary to refuel/recharge those vehicles.
Conversions	Gasoline or diesel original equipment manufacturer (OEM) vehicles altered to operate on an alternative fuel.
Dedicated Alternative Fuel Vehicle	A vehicle that runs only on an alternative fuel, with no gasoline or diesel capability.

TERM	DEFINITION
Dual-Fuel Vehicle	A motor vehicle that is capable of operating on either an alternative fuel and on gasoline or diesel fuel. These vehicles have at least two separate fuel systems which inject each fuel simultaneously into the engine combustion chamber.
Electric Vehicle (EV)	A vehicle capable of highway speeds in which electricity powers the vehicle's wheels via an electric motor. A battery or other energy storage device is used to store the electricity that powers the motor. EV batteries must be replenished by plugging in the vehicle to a power source.
EPA Certification	New motor vehicles and engines and vehicle conversions must be certified by the U.S. Environmental Protection Agency (EPA) for emission compliance before they are legal for sale, use, or registration in the United States. Certification is granted annually to individual engine families and is good for one model year.
GGE	Gasoline Gallon Equivalents.
GVWR (Gross Vehicle Weight Rating)	The weight a vehicle is designed to carry, including the net weight (actual weight of the vehicle as determined on a standard scale) plus the weight of passengers, fuel, cargo, and any additional accessories. The GVWR is a safety standard used to prevent overloading. <b>Please note: The GVWR is NOT the same thing as the Curb Weight, Payload, Gross Axle Weight Rating, Towing Capacity, Fifth Wheel Capacity, or Gross Combined Weight Rating (GCWR).</b>
Heavy-Duty Vehicle	A vehicle whose GVWR is $\geq 10,001$ lbs. (Class 3-8 Trucks; frequently includes super heavy duty commercial pickup trucks)
Hybrid Vehicle	As used in this document, the generic term "hybrid vehicle" means hybrid-electric vehicle and plug-in hybrid or extended range hybrid vehicles.
Hybrid Electric Vehicle (HEV)	A vehicle that typically combines the internal combustion engine of a conventional vehicle with the battery and electric motor of an electric vehicle and that does not need to be plugged in to recharge the battery.
Incremental cost or incremental difference	The price differential between an Original Equipment Manufacturer (OEM) alternative fuel vehicle or hybrid vehicle and a comparably equipped motor vehicle that employs traditional fuel and/or drivetrain technology; or the price of conversion equipment and installation to equip a new OEM conventional-fuel vehicle to run exclusively on alternative fuels plus any premium attached to an OEM conversion-ready engine as compared to its conventional-fuel counterpart.
FMVSS	Federal Motor Vehicle Safety Standards and Regulations as issued by the U.S. Department of Transportation, National Highway Traffic Safety Administration

TERM	DEFINITION
Light-Duty Vehicle	Passenger cars, SUVs, utility vehicles, passenger and cargo vans, and pickup trucks whose GVWR is ≤ 10,000 lbs. (Passenger vehicles and Class 1 and Class 2 Trucks)
Local Government	A county, municipality, city, town, township or school district.
Neighborhood Electric Vehicle (NEV)	An electric vehicle with top speed limited to 25 mph. NEVs are legal in various states on streets with a posted speed limit of 35 mph or less. Also called a low-speed vehicle (LSV).
OEM	Original Equipment Manufacturer. As used in this document, refers to vehicle and/or engine manufacturers.
OCARTS	Oklahoma City Area Regional Transportation Study area. The OCARTS area includes 40 cities and towns located within Oklahoma and Cleveland counties, and portions of Canadian, Grady, McClain and Logan counties.
Plug-in Hybrid Vehicle (PHEV)	A hybrid vehicle with a controller programmed to deplete the charge in the battery pack to make maximum use of electricity from external charging. Depending on the technology, plug-in hybrids may be equipped with an internal combustion engine that provides most of the drive to the wheels, assisted by a battery-powered electric motor; or they may be propelled only by an electric motor that is assisted by an internal combustion engines whose sole job is to turn a generator that produces electricity.
Clean Alternative Fuel Conversion Manufacturer (or Conversion Manufacturer, or Converter)	Any person that manufactures, assembles, sells, imports, or installs a motor vehicle or engine fuel conversion for the purpose of use of a clean alternative fuel.
The Energy Policy Act of 1992 (EPAAct)	Legislation passed by Congress to reduce our nation’s dependence on imported petroleum by requiring certain fleets to acquire alternative fuel vehicles, which are capable of operating on nonpetroleum fuels.
Throughput	Fuel purchased/loaded and sold/used at a fueling site. Applies to all types of fueling stations, including liquid fuels, gaseous fuels, and electric recharging stations.

# APPENDIX B - TRUCK CLASSIFICATIONS

## TRUCK TYPES AND WEIGHT\* CLASSES

### Truck Classifications



CFR 2000-065354g

**CLASS 1**  
6,000 lb & less

Minivan Utility van  
Multi-purpose Full-size pickup

**CLASS 5**  
16,001 to 19,500 lb

Bucket  
City delivery Large walk-in

**CLASS 2**  
6,001 to 10,000 lb

Minivan Utility van  
Full-size pickup Step van

**CLASS 6**  
19,501 to 26,000 lb

Beverage Single-axle van  
School bus Rack

**CLASS 3**  
10,001 to 14,000 lb

Walk-in Conventional van  
City delivery

**CLASS 7**  
26,001 to 33,000 lb

Refuse Furniture  
City transit bus Medium conventional

**CLASS 4**  
14,001 to 16,000 lb

Conventional van City delivery  
Large walk-in

**CLASS 8**  
33,001 lb & over

Dump Cement  
Heavy conventional COE sleeper

\*Weight refers to Gross Vehicle Weight Rating (GVWR) in pounds

## APPENDIX C - ADDITIONAL FUEL, VEHICLE AND EMISSIONS RESOURCES

### ADDITIONAL RESOURCES

1. U.S. DOE Clean Cities 2016 Vehicle Buyer's Guide:  
[https://www.afdc.energy.gov/uploads/publication/vehicle\\_buyers\\_guide.pdf](https://www.afdc.energy.gov/uploads/publication/vehicle_buyers_guide.pdf)
2. U.S. DOE Alternative Fuel Data Center Petroleum Reduction Planning Tool  
<http://www.afdc.energy.gov/prep/>
3. Model Year 2017 Alternative Fuel Vehicles & Advanced Technology Vehicles:  
<https://www.afdc.energy.gov/uploads/publication/model-year-2017-vehicles.pdf>
4. Clean Cities' Guide to Alternative Fuel and Advanced Medium- and Heavy-Duty Vehicles:  
[http://www.afdc.energy.gov/uploads/publication/medium\\_heavy\\_duty\\_guide.pdf](http://www.afdc.energy.gov/uploads/publication/medium_heavy_duty_guide.pdf)
5. U.S. EPA Diesel Emissions Quantifier  
<https://www.epa.gov/cleandiesel/diesel-emissions-quantifier-deq>
6. Business Case for Compressed Natural Gas in Municipal Fleets:  
*National Renewable Energy Laboratory Technical Report June 2010*  
<http://www.afdc.energy.gov/pdfs/47919.pdf>
7. NGVAmerica's Guides to Available Natural Gas Vehicles and Engines (updated 1/17/2017):  
[Light-Duty and Heavy Duty Chassis Vehicles](#)  
and [Heavy Duty Engines](#)
8. Alternative Fuel Light-Duty Vehicle Search:  
<http://www.afdc.energy.gov/vehicles/search/light/>
9. Alternative Fuel Heavy-Duty Vehicle Search:  
<http://www.afdc.energy.gov/vehicles/search/heavy/>
10. U.S. DOE and Environmental Protection Agency Vehicle Comparison and Fuel Economy Guide:  
[www.fueleconomy.gov](http://www.fueleconomy.gov)
11. U.S. DOE Clean Cities:  
<https://cleancities.energy.gov/>
12. U.S. DOE Alternative Fuels & Advanced Vehicles Data Center:  
<http://www.afdc.energy.gov/>
13. United States New Engine and Vehicle Emissions  
<http://www.dieselnets.com/standards/>
14. U.S. Environmental Protection Agency Heavy Duty Trucks, Buses, and Engines – Emissions Rules and Information <http://www.epa.gov/otaq/hd-hwy.htm>