1.0 PURPOSE

The Texas Natural Gas Vehicle Grant Program (TNGVGP) will provide grants for eligible projects to replace existing medium-duty and heavy-duty vehicles with vehicles powered by compressed natural gas (CNG), liquefied natural gas (LNG), or liquefied petroleum gas (LPG). The replacement projects may include purpose-built alternative fuel vehicles and engines, and may also include vehicles and engines converted to operate on an eligible fuel.

TCEQ is requesting manufacturers or authorized representatives of vehicles, engines, or conversion systems that can certify compliance with federal NOx emission standards to assist TCEQ in compiling a list of vehicles and engines, as well as systems for conversion of vehicles and engines, which are eligible for funding under TNGVGP.

Projects must result in a reduction in NO_x emissions of at least 25%, based on the federal emission standard or family emissions limit (FEL) of the vehicle/engine being replaced and the replacement vehicle/engine.

For dual-fuel engines operating on a combination of diesel fuel and the eligible fuel, the engine must be capable of at least 60% displacement of diesel fuel in dual-fuel mode. Manufacturers of dual-fuel engines must establish to TCEQ's satisfaction that an engine or conversion system is capable of displacing at least 60% diesel fuel use when operating in dual-fuel mode.

For more information about the program requirements, please visit the <u>TNGVGP</u> webpage, or contact the TERP grants staff at (800) 919-TERP (8377).

2.0 VEHICLE AND ENGINE ELIGIBILITY

Replacement Projects

Vehicles and engines may be purpose-built to operate on CNG, LNG, or LPG, or may be converted to operate on CNG, LNG, or LPG using a system issued a certificate of conformity (COC) by U.S. Environmental Protection Agency (EPA) for conversion of that new vehicle or engine model and model year.

To be included in the list, vehicles and engines must meet the eligibility requirements below.

Eligible Chassis-Certified Vehicles

An eligible chassis-certified vehicle must:

• have a gross vehicle weight rating (GVWR) of 8,501 lbs. or more;

- be a purpose-built or converted on-road motor vehicle that operates on CNG, LNG, or LPG, or in combination with diesel fuel and capable of at least 60% displacement of diesel fuel use in dual-fuel operation; and
- be certified by the EPA to meet or exceed the current emissions standards for chassis-certified heavy-duty vehicles and vehicles classified as a Medium-Duty Passenger Vehicle.

Bi-fuel chassis-certified vehicles, capable of operating on an eligible fuel and gasoline, are not eligible.

Eligible Heavy-Duty Engines

An eligible heavy-duty engine must:

- be intended for installation on heavy-duty vehicles with a GVWR of 8,501 lbs. or more;
- be a purpose-built heavy-duty engine that operates on CNG, LNG, or LPG, or in combination with diesel fuel and capable of at least 60% displacement of diesel fuel use in dual-fuel operation; and
- be certified by the EPA to emit not more than 0.2 grams of NO_x per brake horsepower-hour (bhp-hr).

Bi-fuel engines, capable of operating on an eligible fuel and gasoline, are not eligible.

Repower Projects

A repower project may include the replacement of the engine on an existing vehicle over 8,501 GVWR with a different eligible engine or may include conversion of the vehicle or engine with an eligible conversion system.

A project must result in a reduction in NO_x emissions of at least 25%. Any conversion system must be certified by the EPA to a NO_x emissions standard or FEL that is at least 25% lower than the emissions standard or FEL of the original vehicle/engine.

Certified Engines

A heavy-duty engine eligible for replacing an existing engine must:

- be intended for installation on an existing heavy-duty vehicle with a GVWR of 8,501 lbs. or more;
- be a purpose-built heavy-duty engine that operates on CNG, LNG, or LPG, or in combination with diesel fuel and capable of at least 60% displacement of diesel fuel use in dual-fuel operation; and

• be certified by the EPA to emit not more than 0.2 grams of NO_x per bhphr.

Bi-fuel engines, capable of operating on an eligible fuel and gasoline, are not eligible.

Certified Heavy-Duty Engine Conversion

A conversion system eligible for converting an existing engine or replacing an existing engine with the converted engine must:

- be intended for installation on an existing heavy-duty vehicle with a GVWR of 8,501 lbs. or more;
- be intended to convert a heavy-duty engine to operate on CNG, LNG, or LPG, or in combination with diesel fuel and capable of at least 60% displacement of diesel fuel use in dual-fuel operation; and
- be certified by the EPA to emit not more than 0.2 grams of NO_x per bhp-hr.

Bi-fuel engines, capable of operating on an eligible fuel and gasoline, are not eligible.

Certified Vehicle Conversion Systems

A conversion system eligible for converting an existing chassis-certified vehicle must:

- be intended for conversion of an existing chassis-certified heavy-duty vehicle or medium-duty passenger vehicle with a GVWR of 8,501 lbs. or more:
- be intended to convert the vehicle to operate on CNG, LNG, or LPG, or in combination with diesel fuel and capable of at least 60% displacement of diesel fuel use in dual-fuel operation; and
- be certified by the EPA to meet or exceed the current emissions standards for chassis-certified heavy-duty vehicles or meet or exceed the EPA's Bin 5 standard for vehicles classified as Medium-Duty Passenger Vehicles.

Bi-fuel chassis-certified vehicles, capable of operating on an eligible fuel and gasoline, are not eligible.

Acceptance of Test Data

Under the Repower category, in cases where a conversion system is not certified to the current federal emission standards, the TCEQ may consider whether the results of testing conducted for certification or acceptance of the system by the EPA

demonstrates that the system results in a NO_x emissions rate consistent with the current emissions standards.

Tests conducted for certification by the California Air Resources Board (CARB) may also be considered.

Under this alternative acceptance provision, the testing used to obtain the emissions data must have been consistent with the testing required for EPA approval of an alternative fuel conversion system for New and Relatively New vehicles/engines under 40 C.F.R. §85.510.

3.0 FORM INSTRUCTIONS

Original Equipment Manufacturers (OEM) of natural gas vehicles, engines, or conversion systems or an authorized representative may submit the TNGVGP Manufacturer Information Request Forms to the TCEQ. Forms can be downloaded from our the TNGVGP webpage and filled out electronically.

Depending on the type of natural gas vehicle, engine, or conversion system being submitted for consideration, the respondent will choose from 1 of 6 Manufacturer Information Request Forms (Forms 20609/a-f). Each of the 6 forms includes a Contact Information page and an Equipment Information page. All respondents must first select the appropriate Information Request Form, complete and sign the Contact Information page, and complete as many copies of the Equipment Information page as needed for all the eligible models manufactured by the OEM.

If you need additional information or clarification, please contact TCEQ staff before submitting the forms. You may include forms for various models with each submission.

Submission

Responses will be accepted for consideration by TCEQ via electronic mail at tNGVGP-Apply@tceq.texas.gov or via mail at one of TCEQ's addresses. Responses sent via electronic mail should include 'TNGVGP Info Request' in the subject line.

Regular Post Delivery:

Texas Commission on Environmental Quality Air Grants Division (TNGVGP) MC-204 P.O. Box 13087 Austin, TX 78711-3087

Express Mail:

Texas Commission on Environmental Quality

Air Grants Division (TNGVGP) MC-204 12100 Park 35 Circle Austin, TX 78753

Submission Deadlines

The TCEQ will accept submissions on a continuous basis as vehicles, engines, or conversion systems are certified by the EPA.

Manufacturer Information Request Forms

Each of the following 6 Manufacturer Information Request Forms (20609/a-f) includes a cover page, a Contact Information page (Section 1) and an Equipment Information page (Section 2). All respondents must determine the correct information request form, and then complete Sections 1 and 2.

Form 20609/a - Chassis-Certified Vehicles

Form 20609/a should be used for purpose-built chassis-certified vehicles powered by CNG, LNG, or LPG and certified to the current federal emission standards. This form should not be used for vehicles that are originally manufactured to operate on gasoline or diesel fuel, even if the conversion of the vehicle may occur through a flow-through process prior to first sale of the vehicle.

Chassis-certified vehicles include vehicles classified as Medium Duty Passenger Vehicles under EPA requirements, between 8,501 and 10,000 lbs. GVWR, and heavy-duty vehicles between 8,501 and 14,000 lbs. GVWR that are alternatively chassis-certified by the EPA.

Form 20609/b - Heavy-Duty Engines

Form 20609/b should be used for purpose-built heavy-duty engines powered by CNG, LNG, or LPG and certified by the EPA to the current federal emission standards.

Form 20609/c - Chassis-Certified Vehicle Conversion Systems

Form 20609/c should be used for systems to convert a chassis-certified vehicle after initial manufacture as part of a flow-through process before first sale of the new vehicle. The converted vehicle must be certified by the EPA to the current federal emission standards.

Form 20609/d - Existing Engine Conversion Systems

Form 20609d should be used for systems to convert an older existing heavy-duty compression ignition diesel engine to operate on an eligible fuel or a combination of the eligible fuel and diesel fuel (dual-fuel). The converted engine must be certified by the EPA to the current federal emission standards under the provisions of 40 C.F.R. Part 85, under which a manufacturer may request that EPA certify the

conversion system to a more stringent standard than the emission standard of the engine(s) being converted.

Form 20609/e - Chassis-Certified Vehicle Conversion Systems Not Certified to the Current Federal Emission Standards

Manufacturers of systems to convert an older existing chassis-certified vehicle under the repower category may submit information about the system in Form 20609e. The conversion must result in a reduction in NO_x emissions of at least 25% compared to the un-converted vehicle.

In most cases, if a manufacturer of a conversion system for Intermediate Age (IA) or Outside Useful Life (OUL) vehicles or engines has performed the level of testing required for approval for conversion of New and Relatively New vehicles and engines, the manufacturer will also request that EPA issue a Certificate of Conformity for that IA or OUL conversion system. If a Certificate of Conformity is issued by the EPA, provide that with the test data. If possible, a manufacturer should request that EPA include the certified test results on the certificate.

In addition, if the manufacturer has received an Executive Order (EO) from CARB certifying the vehicle or engine to the California requirements, the certified test results should be listed on the EO. That EO should be also be provided.

The test results for the tests conducted under the required Federal Test Procedures (FTP) should be provided, as well as the results of other tests requested/required by EPA or CARB. Documentation provided to the EPA or CARB, such as the test report from an independent testing facility outlining those results should be included.

TCEQ will evaluate the FTP test results, in conjunction with review of the results of other tests, to determine if the NO_x emissions results are consistent with levels that would likely be necessary for EPA approval to the current federal NO_x emission standards.

Note, for systems to convert a diesel engine to use both diesel fuel and one of the eligible fuels in dual-fuel operation, the test results must demonstrate that the converted engine meets the current federal NO_x emission standards in both dieselonly mode and dual-fuel mode.

Form 20609/f - Heavy-Duty Engine Conversion Systems Not Certified to the Current Federal Emission Standards

Manufacturers of systems to convert an older heavy-duty diesel or gasoline engine under the repower category, either by converting the existing engine on the vehicle or removing and replacing the engine with a converted engine, may submit information about the system in Form 20609f. The repower must result in a reduction in NO_x emissions of at least 25% compared to the un-converted vehicle.

In most cases, if a manufacturer of a conversion system for Intermediate Age (IA) or Outside Useful Life (OUL) vehicles or engines has performed the level of testing required for approval for conversion of New and Relatively New vehicles and engines, the manufacturer will also request that EPA issue a Certificate of Conformity for that IA or OUL conversion system. If a Certificate of Conformity is issued by the EPA, provide that with the test data. If possible, a manufacturer should request that EPA include the certified test results on the certificate.

The test results for the tests conducted under the required Federal Test Procedures (FTP) should be provided, as well as the results of other tests requested/required by EPA. Documentation provided to the EPA, such as the test report from an independent testing facility, outlining those results should be included.

The TCEQ will evaluate the FTP test results, in conjunction with review of the results of other tests, to determine if the NO_x emissions results are consistent with levels that would likely be necessary for EPA approval to the current federal NO_x emission standards.

Note, for systems to convert a diesel engine to use both diesel fuel and one of the eligible fuels in dual-fuel operation, the test results must demonstrate that the converted engine meets the current federal NO_x emission standards in both dieselonly mode and dual-fuel mode.

For additional guidance, or assistance with the Information Request Forms, please contact TERP staff at (800) 919-8377 or terp@tceq.texas.gov.