New Jersey Natural Gas

Submitted via e-mail to VWComments@dep.nj.gov

January 30, 2018

Peg Hanna, Acting Assistant Director
Air Monitoring and Mobile Sources
New Jersey Department of Environmental Protection
Division of Air Quality
Mail code 401-02E
Trenton, NJ 08625-0420

Attn: Volkswagen Settlement

Dear Director Hanna,

As the senior vice president – Marketing, Customer Service and Energy Efficiency for New Jersey Natural Gas (NJNG), I appreciate the opportunity to submit the following comments and recommendations, as well as a completed Volkswagen settlement project solicitation form to the New Jersey Department of Environmental Protection (NJDEP). As I understand it, this process is designed to support New Jersey's goal of efficiently and expeditiously evaluating and implementing projects that reduce oxides of nitrogen (NOx) emissions in a cost effective and technically feasible manner. Given New Jersey's goals for the expenditure of the settlement funds, I urge the state to include Compressed Natural Gas (CNG) transportation projects as a program priority, as they present the most efficient, cost-effective and immediate pathway to reduce NOx emissions, mitigate public health risks and provide air quality benefits in areas disproportionately burdened by diesel pollution.

The latest iteration of near-zero emission medium- and heavy-duty engines fueled by CNG yield unrivaled NOx reductions. This new engine technology is certified by the Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) at 0.02 g/bhp-hr NOx, which is 90 percent lower than the current emission standard for heavy-duty engines (and similarly lower than the level that the cleanest diesels can achieve).[1] According to NGVAmerica, this solution is necessitated by the transportation sector's impact on our air quality stating that, "while heavy-duty vehicles total 7 percent of all vehicles on America's roadways, they account for 50 percent of all smog-precursor emissions and 20 percent of all transportation-related greenhouse gases (GHG)."[2] What's more, in New Jersey, on-road heavy-duty diesel vehicles account for 53 percent of the state's NOx emissions from mobile diesel sources.[3]

Importantly, while many other advanced vehicle technologies continue their pre-commercial development efforts, this near-zero emission engine technology is commercially available today, ready

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[1] "ISL G Near Zero Natural Gas Engine Certified to Near Zero - First Mid-Range engine in North America to reduce NOx emissions by 90% from EPA 2010". Cummins Westport, October 5, 2010. http://www.cumminswestport.com/press-releases/2015/isl-g-near-zero-natural-gas-engine-certified-to-near-zero.

[2] Gage, Daniel J. "Opinion : VW Settlement Offers Funds for Purchase of Natural Gas Trucks". Transport Topics, November 16, 2017. http://www.ttnews.com/articles/opinion-vw-settlement-offers-funds-purchase-natural-gas-trucks.

[3] "2014 National Emissions Inventory (NEI) Data". Environmental Protection Agency, Air Emissions Inventories. https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data, accessed January 9, 2018.

for immediate deployment without lengthy delivery windows, and suitable across a wide range of vehicle platforms. Furthermore, the service network and fueling infrastructure is already well established for these technologies.

These types of projects also provide significant environmental justice benefits. Heavy-duty diesel vehicles emit disproportionately high levels of pollutants that cause millions of New Jersey citizens to regularly breathe unhealthful air. They emit high levels of toxic air contaminants (TACs), such as cancer-causing diesel particulate matter (DPM) that disproportionately impacts minority populations living in economically disadvantaged communities, which are often located adjacent to freeways, ports, distribution centers and other areas of high diesel engine activity.[4,5] By replacing these vehicles with cleaner burning CNG vehicles, New Jersey can quickly mitigate these harmful effects.

As evidence of similar efforts, California has prioritized near-zero emission CNG vehicles in its recently published Mobile Source Strategy because of this technology's ability to rapidly provide broad health benefits at both the regional and community level. Specifically, CARB notes that the "large-scale deployment over the next 15 years of low-NOx heavy-duty engines for ozone and PM2.5 attainment, combined with particulate filters to reduce direct particle emissions, will provide the largest health benefit of any single new strategy."[6]

In our own state, New Jersey's natural gas utilities have long supported the state's initiatives to deploy alternative fuel vehicles. Working closely with the New Jersey Clean Cities program and its stakeholders, natural gas utilities have encouraged the development of CNG fueling stations and the deployment of hundreds of cleaner-burning natural gas vehicles (NGV). Moreover, the utilities themselves have begun to transition their own fleets to NGVs.

Case in point, in 2012, NJNG began its clean fleet transition following approval from the New Jersey Board of Public Utilities to construct three publicly accessible CNG stations. At the end of fiscal year 2017, NJNG dispensed over 4.3 million gasoline gallon equivalents (GGEs) in Monmouth, Ocean and Morris counties, which equates to reducing GHG emissions by over 8,000 metric tons. NJNG has successfully converted approximately 10 percent of its current fleet to CNG and plans a 3 percent increase of its NGV's compared to its overall fleet vehicles. When comparing current NGV's, NJNG will increase that number by 42 percent over the next two years. As demonstrated by NJNG and others, New Jersey's natural gas utilities have shown a willingness to invest in these types of projects, and can thus help further leverage the state's Volkswagen funds.

To help support and guide the state's efforts to meet the NOx reduction goals of the settlement; leverage existing infrastructure and other assets to stretch the state's dollars further; and, ultimately, provide the most cost-effective public health benefits to at-risk populations, NJNG presents the following recommendations:

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[4] "IARC: Diesel Engine Exhaust Carcinogenic". International Agency for Research on Cancer, World Health Organization, WHO, June 12, 2012. https://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr213_E.pdf, accessed January 9, 2018.
[5] "Selected References: Health Effects Associated with Diesel Exhaust Particulate Matter (DPM) Exposure". California Air Resources Board, April 12, 2016. https://www.arb.ca.gov/research/diesel/diesel-health_refs.htm, accessed January 9, 2018.
[6] "Mobile Source Strategy". California Air Resources Board, May 2016. https://www.arb.ca.gov/planning/sip/2016sip/2016mobsrc.pdf, page 79.

Recommendations and Best Practices

Create Alternative Fuel- and Technology-Neutral Funding Programs

The Volkswagen settlement funds present New Jersey with the opportunity to look beyond conventional petroleum fuels to not only mitigate the harmful emissions created by diesel vehicles, but also incentivize the adoption of cutting edge alternative fuel vehicle technologies. To do so, the Volkswagen settlement provides New Jersey with an array of alternative fuel vehicle projects from which it may select – on-road trucks and buses, non-road equipment, marine engines and locomotives, among others. This extensive menu could potentially create a scenario by which New Jersey manages multiple individual grant programs, leading the state to carrying increased overhead expenses and staffing costs.

To reduce the state's administrative burden, it is recommended that New Jersey create fuel- and technology-neutral funding programs that prioritize cost-effective NOx reductions. This puts the impetus on the applicants to propose the most cost-effective project while creating a more efficient format by which the state reviews applications. Further, objectively ranking projects by their NOx cost-effectiveness is defensible and an effective means to justify further funding requests from the Wilmington Trust.

Prioritize Projects that Can Leverage Existing Refueling Infrastructure

NJNG appreciates the significant investments needed for fleets to convert to alternative fuels, but notes that those vehicle costs are just one side of the coin. Additional and often more cost-intensive infrastructure investments are also required to provide these fleets with reliable and sufficient fueling capacity.

While we understand that standalone alternative refueling stations are not eligible for Volkswagen funding (save for that of light-duty electric vehicle supply equipment), we recommend that New Jersey recognize the cost-effective benefits for those projects proposing to leverage existing refueling infrastructure. By doing so, applicants with refueling infrastructure already in place are helping the state to increase the cost-effectiveness of its Volkswagen funds by leveraging existing assets. In other words, on a whole project basis, funding alternative fuel vehicle projects that propose to use already available commercial fueling stations with existing capacity can help better utilize the state's prior investments in clean transportation technology.

Figure 1: New Jersey's Natural Gas Vehicle Refueling Infrastructure

In addition, it is important to note, for medium- and heavy-duty electric vehicles, Volkswagen settlement funding allows for the funds to cover not only the vehicles but also

the charging infrastructure. It thus seems only appropriate and reasonable that the costs of that infrastructure be included in the calculation of the cost-effectiveness of the proposed technology deployment project.

As discussed above, New Jersey's natural gas utilities have made substantial investments to create a statewide network of CNG stations, as shown in Figure 1. They are therefore positioned to provide the state with the means to efficiently roll out new alternative vehicle projects without waiting on costly new refueling infrastructure installations.

Prioritize Projects that Benefit Areas Disproportionately Burdened by Diesel Pollution

Each of the state's twenty-one counties is designated by the Environmental Protection Agency (EPA) as nonattainment under the ozone standards.[7] This means that the state's 8.8 million citizens are at increased risk for aggravated lung diseases, such as asthma, emphysema and chronic bronchitis. These adverse health impacts, for which children and the elderly are particularly susceptible, may lead to increased school absences, medication use, visits to doctors and emergency rooms, hospital admissions and mortality.[8]

Recommending the prioritization of ozone nonattainment areas, which is a viable strategy in other states, is a moot point in New Jersey. Therefore, it is recommended that New Jersey allow for funding statewide in order to address these NOx emission issues. Further, it is recommended that New Jersey provide "bonus points" in the application review process to projects that meet additional scoring criteria. Specifically, the state should prioritize counties that meet the following criteria:

- Counties designated as PM 2.5 Nonattainment or Maintenance,[9]
- Counties where all or part of the population is exposed to more than 2.0 µg/m3 of diesel particulate matter emissions,[10] and/or
- Counties with existing and/or planned development of alternative fuel refueling infrastructure.

This would allow for statewide funding of projects, but prioritize the following counties: Atlantic, Bergen, Burlington, Camden, Cape May, Essex, Gloucester, Hudson, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset and Union.

Incorporate Reliable and Defensible Application Evaluation Methods

A Project solicitation form has been completed and included as attachments to this letter. I have also compiled our projects in Table 1 below.

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[7] "Green Book 8-Hour Ozone (2008) Area Information". EPA, 2017. https://www.epa.gov/green-book/green-book-8-hour-ozone-2008-area-information.
[8] "Health Effects of Ozone Pollution". EPA, 2017. https://www.epa.gov/ozone-pollution/health-effects-ozone-pollution.
[9] "Green Book PM-2.5 (2012) Area Information". EPA, 2017. https://www.epa.gov/green-book/green-book-pm-25-2012-area-information.
[10] "2011 NATA: Assessment Results". EPA, 2017. https://www.epa.gov/national-air-toxics-assessment/2011-nata-assessment-results.

Table 1: NJNG's Project Ideas

Data Element	Project 1	Project 2	Project 3	Project 4
Vehicle Type	Cement Truck	Refuse Hauler	Millwork Truck	Beverage Delivery
Number of Vehicles to be Replaced	20	10	12	10
Age of Diesel Vehicle to be Replaced	15+ years	12-17 years	13+ years	13 + years
Annual Mileage	25,000 per vehicle	20,000 per vehicle	18,000 per vehicle	18,700 per vehicle
Annual Fuel Consumption	12,500 per vehicle	10,000 per vehicle	3,600 per vehicle	3,750 per vehicle
Total Cost of New Vehicle	210,000 per vehicle	330,000 per vehicle	120,000 per vehicle	120,000 per vehicle
Project Location – Town (County)	Sparta	Toms River	Lakewood	Robbinsville
Project Partners, if applicable	Blue Diamond	Tri State	Wood Haven Lumber	Richie & Page

Recognize the Promising Future of RNG

Renewable natural gas (RNG) complements the NOx reductions provided by the near-zero emission engine discussed above as it offers a game-changing solution to heavy-duty transportation issues by providing the lowest carbon intensity of any fuel available in the market today.[11] RNG can immediately provide substantial GHG emission reductions and expanded RNG production in New Jersey and offers an array of environmental and economic benefits, including enhanced job creation, improved air quality and various environmental waste stream management improvements that will accrue at local levels.

Near-zero-emission natural gas engines using RNG therefore provide a commercially proven, broad-based and affordable strategy to immediately achieve major reductions in emissions of criteria pollutants, air toxins and GHGs from New Jersey's on-road transportation sector. Furthermore, while it is beyond the scope of this particular program, encouraging the use of RNG in lieu of diesel is consistent with many of the goals of the NJDEP, including diversion of food waste to landfills, more efficient capture of methane emissions and other priorities.

While funding for the fuel components of a given project is not eligible for Volkswagen settlement funding, I do urge the state to recognize the combination of new near-zero emission natural gas engine technology and RNG provides the best opportunities for the state to achieve immediate and substantial NOx and GHG emission reductions in the on-road transportation sector. Equally important, major reductions of cancer-causing toxic air contaminants can immediately be realized in communities adjacent to freeways and areas of high diesel engine activity, where relief is most urgently needed.

[11] "Game Changer Technical White Paper Executive Summary". Gladstein, Neandross & Associates, April 2016. http://www.gladstein.org/gna_whitepapers/game-changer-next-generation-heavy-duty-natural-gas-engines-fueled-by-renewable-natural-gas/, pages 3-4.

Conclusion

On behalf of NJNG, I thank the NJDEP for the opportunity to provide these comments and recommendations, along with the completed project form attached to this letter. As you can see, our utility has proposed projects that provide cost-effective, near- and long-term NOx reductions in areas in desperate need of diesel emission relief, including Sparta, Toms River, Lakewood and Robbinsville.

I hope to engage with you and your team further as NJNG intends to serve as a reliable source of data as you develop the state's Beneficiary Mitigation Plan. In the meantime, should you have any questions or if I can be of assistance, feel free to reach out to me directly. My contact information is provided below.

Sincerely,

Thomas Massaro
Senior Vice President – Marketing, Customer Service and Energy Efficiency
New Jersey Natural Gas
TJMassaro@njng.com / 732-919-8245

Please see the following Project Forms.

CONTACT INFORMATION

Organization Name	New Jersey Natural Gas
Organization Address	1415 Wyckoff Road
City, State Zip Code	Wall Township, NJ 07719
Contact Person	Thomas Massaro
Title/Position	Senior Vice President – Marketing Customer Service
Phone	(732) 938-1136
E-mail	tjmassaro@njng.com

PROJECT NAME	Project 1 - Blue Diamond Cement Trucks

PROJECT CATEGORY OR CATEGORIES (choose from 1-9 in "Eligible Projects" section above)

1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

PROJECT PRIORITY Priority # 1 of 4 proposals

If submitting more than one proposal, what is the sponsor's priority of this proposal?

PROJECT BUDGET $ 1,000,000.00

Provide total estimated project budget, include source and amount of cost share if applicable.

We propose that New Jersey cover the incremental capital expense of $50,000 for each of the 20 new Class 8 low NOx CNG cement trucks proposed to be deployed in this project.

PROJECT DESCRIPTION (Briefly describe the project by completing the following questions)

Geographic area where emissions reductions will occur? Sparta in Sussex County

Estimated size of population benefitting from the emission reductions? 143,673

Estimated useful life of the project? 20 years

Number of engines/vehicles/vessels/equipment included in the project? 20

Estimated emission benefits should be expressed in tons per year (TPY) of emission reduced for NOx and for PM 2.5 over the lifetime of the project. Identify methodology used.

Estimated NOx benefits? 7.06 TPY

Methodology Used? Emissions factors use MOVES 2017 and AFLEET

Particulate matter (PM 2.5) benefits? 0.00 TPY

Methodology Used? Emissions factors use MOVES 2017 and AFLEET

Will the project benefit one or more communities that are disproportionately impacted by air pollution? If so, please describe.

The project will be located in Sparta in Sussex County. Because these vehicles are domiciled in Sparta but operate county-wide, the project will provide immediate and sustained air quality benefits in a county that is in Ozone Nonattainment.

Project partners, if any?

Blue Diamond Disposal

Explain how the project will provide cost effective and technically feasible emission reductions. Cost effectiveness should be expressed in dollars per ton per year of emissions reduced for NOx and for PM 2.5.

The NOx cost-effectiveness ($/ton) of the project is $7,085, based on the incremental capital expense of $50,000 and the lifetime NOx benefits of 7.06 tons per vehicle. The project proposes to use the Cummins Westport Low NOx engine, which is market-ready and certified at 0.02 g NOx/bhp-hr. We conservatively assumed no PM benefits from natural gas vehicles relative to new 2010-compliant diesels.

Estimated timeframe for implementation? Include a project timeline that identifies start and end dates, as well as the timeframe for key milestones.

The Cummins Westport engine is available for immediate deployment. Thus, the new vehicles can be deployed within 12 months of grant award, which reflects the time needed to build the new vehicles to Blue Diamond's specifications.

Demonstrated success in implementing similar projects?

After making the decision to incorporate new CNG powered vehicles into their fleet, Blue Diamond Disposal contracted the building of the first CNG refueling station in Morris County. Blue Diamond is still working towards a 100% CNG vehicle fleet. As of the fall of 2016, 90% of Blue Diamond's fleet have been converted to natural gas.

If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure.

New Jersey Natural Gas supports Blue Diamond's efforts to deploy CNG vehicles and commits to providing a safe, accessible, and efficient refueling station in close proximity to the vehicles' area of operation.

Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details.

The project does not expect to expend other grant funds.

Please provide any additional information that supports this project.

CONTACT INFORMATION

Organization Name	New Jersey Natural Gas
Organization Address	1415 Wyckoff Road
City, State Zip Code	Wall Township, NJ 07719
Contact Person	Thomas Massaro
Title/Position	Senior Vice President – Marketing Customer Service
Phone	(732) 938-1136
E-mail	tjmassaro@njng.com

PROJECT NAME	Project 2 - Tri State Refuse Haulers

PROJECT CATEGORY OR CATEGORIES (choose from 1-9 in "Eligible Projects" section above)

1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

PROJECT PRIORITY Priority # 2 of 4 proposals

If submitting more than one proposal, what is the sponsor's priority of this proposal?

PROJECT BUDGET $ 500,000.00

Provide total estimated project budget, include source and amount of cost share if applicable.

We propose that New Jersey cover the incremental capital expense of $50,000 for each of the 10 new Class 8 low NOx CNG refuse haulers proposed to be deployed in this project.

PROJECT DESCRIPTION (Briefly describe the project by completing the following questions)

Geographic area where emissions reductions will occur? Toms River in Ocean County

Estimated size of population benefitting from the emission reductions? 588,721

Estimated useful life of the project? 15 years

Number of engines/vehicles/vessels/equipment included in the project? 10

Estimated emission benefits should be expressed in tons per year (TPY) of emission reduced for NOx and for PM 2.5 over the lifetime of the project. Identify methodology used.

Estimated NOx benefits? 2.64 TPY

Methodology Used? Emissions factors use MOVES 2017 and AFLEET

Particulate matter (PM 2.5) benefits? 0.00 TPY

Methodology Used? Emissions factors use MOVES 2017 and AFLEET

Will the project benefit one or more communities that are disproportionately impacted by air pollution? If so, please describe.

The project will be located in Toms River in Ocean County. Because these vehicles are domiciled in Toms River but operate county-wide, the project will provide immediate and sustained air quality benefits in a county that is in Ozone Nonattainment.

Project partners, if any?

Tri-State Carting

Explain how the project will provide cost effective and technically feasible emission reductions. Cost effectiveness should be expressed in dollars per ton per year of emissions reduced for NOx and for PM 2.5.

The NOx cost-effectiveness ($/ton) of the project is $12,631, based on the incremental capital expense of $50,000 and the lifetime NOx benefits of 3.96 tons per vehicle. The project proposes to use the Cummins Westport Low NOx engine, which is market-ready and certified at 0.02 g NOx/bhp-hr. We conservatively assumed no PM benefits from natural gas vehicles relative to new 2010-compliant diesels.

Estimated timeframe for implementation? Include a project timeline that identifies start and end dates, as well as the timeframe for key milestones.

The Cummins Westport engine is available for immediate deployment. Thus, the new vehicles can be deployed within 12 months of grant award, which reflects the time needed to build the new vehicles to Tri-State's specifications.

Demonstrated success in implementing similar projects?

NJNG has been a leader in environmental transportation through its work with federal agencies, municipalities, military bases, educational institutions, and businesses. Of note, NJNG has implemented an investment program to deploy new CNG stations throughout its service territory with a focus on converting local commercial vehicle fleets to CNG operations.

If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure.

New Jersey Natural Gas supports Tri-State Carting's efforts to deploy CNG vehicles and commits to providing a safe, accessible, and efficient refueling station in close proximity to the vehicles' area of operation.

Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details.

The project does not expect to expend other grant funds.

Please provide any additional information that supports this project.

CONTACT INFORMATION

Organization Name	New Jersey Natural Gas
Organization Address	1415 Wyckoff Road
City, State Zip Code	Wall Township, NJ 07719
Contact Person	Thomas Massaro
Title/Position	Senior Vice President – Marketing Customer Service
Phone	(732) 938-1136
E-mail	tjmassaro@njng.com

PROJECT NAME	Project 3 - Wood Haven Lumber Millwork Trucks

PROJECT CATEGORY OR CATEGORIES (choose from 1-9 in "Eligible Projects" section above)

1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

PROJECT PRIORITY Priority # 3 of 4 proposals

If submitting more than one proposal, what is the sponsor's priority of this proposal?

PROJECT BUDGET $ 600,000.00

Provide total estimated project budget, include source and amount of cost share if applicable.

We propose that New Jersey cover the incremental capital expense of $50,000 for each of the 12 new Class 8 low NOx CNG millwork delivery trucks proposed to be deployed in this project.

PROJECT DESCRIPTION (Briefly describe the project by completing the following questions)

Geographic area where emissions reductions will occur? Lakewood in Ocean County

Estimated size of population benefitting from the emission reductions? 588,721

Estimated useful life of the project? 14 years

Number of engines/vehicles/vessels/equipment included in the project? 12

Estimated emission benefits should be expressed in tons per year (TPY) of emission reduced for NOx and for PM 2.5 over the lifetime of the project. Identify methodology used.

Estimated NOx benefits? 0.56 TPY

Methodology Used? Emissions factors use MOVES 2017 and AFLEET

Particulate matter (PM 2.5) benefits? 0.00 TPY

Methodology Used? Emissions factors use MOVES 2017 and AFLEET

Will the project benefit one or more communities that are disproportionately impacted by air pollution? If so, please describe.

The project will be located in Lakewood in Ocean County. Because these vehicles are domiciled in Lakewoodbut operate county-wide, the project will provide immediate and sustained air quality benefits in a county that is in Ozone Nonattainment.

Project partners, if any? Wood Haven Lumber
Explain how the project will provide cost effective and technically feasible emission reductions. Cost effectiveness should be expressed in dollars per ton per year of emissions reduced for NOx and for PM 2.5. The NOx cost-effectiveness ($/ton) of the project is $76,278, based on the incremental capital expense of $50,000 and the lifetime NOx benefits of 0.66 tons per vehicle. The project proposes to use the Cummins Westport Low NOx engine, which is market-ready and certified at 0.02 g NOx/bhp-hr. We conservatively assumed no PM benefits from natural gas vehicles relative to new 2010-compliant diesels.
Estimated timeframe for implementation? Include a project timeline that identifies start and end dates, as well as the timeframe for key milestones. The Cummins Westport engine is available for immediate deployment. Thus, the new vehicles can be deployed within 12 months of grant award, which reflects the time needed to build the new vehicles to Wood Haven Lumber's specifications.
Demonstrated success in implementing similar projects? NJNG has been a leader in environmental transportation through its work with federal agencies, municipalities, military bases, educational institutions, and businesses. Of note, NJNG has implemented an investment program to deploy new CNG stations throughout its service territory with a focus on converting local commercial vehicle fleets to CNG operations.
If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure. New Jersey Natural Gas supports Wood Haven Lumber's efforts to deploy CNG vehicles and commits to providing a safe, accessible, and efficient refueling station in close proximity to the vehicles' area of operation.
Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details. The project does not expect to expend other grant funds.
Please provide any additional information that supports this project.

CONTACT INFORMATION

Organization Name	New Jersey Natural Gas
Organization Address	1415 Wyckoff Road
City, State Zip Code	Wall Township, NJ 07719
Contact Person	Thomas Massaro
Title/Position	Senior Vice President – Marketing Customer Service
Phone	(732) 938-1136
E-mail	tjmassaro@njng.com

PROJECT NAME	Project 4 - Ritchie & Page Delivery Trucks

PROJECT CATEGORY OR CATEGORIES (choose from 1-9 in "Eligible Projects" section above)

1 ☑ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐

PROJECT PRIORITY Priority # 4 of 4 proposals

If submitting more than one proposal, what is the sponsor's priority of this proposal?

PROJECT BUDGET $ 500,000.00

Provide total estimated project budget, include source and amount of cost share if applicable.

We propose that New Jersey cover the incremental capital expense of $50,000 for each of the 12 new Class 8 low NOx CNG millwork delivery trucks proposed to be deployed in this project.

PROJECT DESCRIPTION (Briefly describe the project by completing the following questions)

Geographic area where emissions reductions will occur? Robinsville in Mercer County

Estimated size of population benefitting from the emission reductions? 371,398

Estimated useful life of the project? 14 years

Number of engines/vehicles/vessels/equipment included in the project? 10

Estimated emission benefits should be expressed in tons per year (TPY) of emission reduced for NOx and for PM 2.5 over the lifetime of the project. Identify methodology used.

Estimated NOx benefits? 0.29 TPY

Methodology Used? Emissions factors use MOVES 2017 and AFLEET

Particulate matter (PM 2.5) benefits? 0.00 TPY

Methodology Used? Emissions factors use MOVES 2017 and AFLEET

Will the project benefit one or more communities that are disproportionately impacted by air pollution? If so, please describe.

The project will be located in Robinsville in Mercer County. Because these vehicles are domiciled in Robinsville but operate county-wide, the project will provide immediate and sustained air quality benefits in a county that is in both Ozone and PM2.5 Nonattainment.

Project partners, if any?

Ritchie & Page Distributing Company

Explain how the project will provide cost effective and technically feasible emission reductions. Cost effectiveness should be expressed in dollars per ton per year of emissions reduced for NOx and for PM 2.5.

The NOx cost-effectiveness ($/ton) of the project is $124,746, based on the incremental capital expense of $50,000 and the lifetime NOx benefits of 0.4 tons per vehicle. The project proposes to use the Cummins Westport Low NOx engine, which is market-ready and certified at 0.02 g NOx/bhp-hr. We conservatively assumed no PM benefits from natural gas vehicles relative to new 2010-compliant diesels.

Estimated timeframe for implementation? Include a project timeline that identifies start and end dates, as well as the timeframe for key milestones.

The Cummins Westport engine is available for immediate deployment. Thus, the new vehicles can be deployed within 12 months of grant award, which reflects the time needed to build the new vehicles to Ritchie & Page's specifications.

Demonstrated success in implementing similar projects?

NJNG has been a leader in environmental transportation through its work with federal agencies, municipalities, military bases, educational institutions, and businesses. Of note, NJNG has implemented an investment program to deploy new CNG stations throughout its service territory with a focus on converting local commercial vehicle fleets to CNG operations.

If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure.

NJNG supports Ritchie & Page's efforts to deploy CNG vehicles and commits to providing a safe, accessible, and efficient refueling station in close proximity to the vehicles' area of operation.

Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details.

The project does not expect to expend other grant funds.

Please provide any additional information that supports this project.