

Testimony of
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Natural Gas Fuel Use Incentives in Transportation
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Good Morning Chairman Sturla, Chairman Vitali, and Members of the Committee. Thank you for the opportunity to appear before you today and present information about the ongoing activities regarding natural gas use incentives in Pennsylvania managed by the Office of Pollution Prevention and Energy Assistance in Pennsylvania's Department of Environmental Protection.

My name is David Althoff Jr. and I've worked in for the Office of Pollution Prevention and Energy Assistance helping to oversee and deploy Alternative Energy Programs for PADEP for the past 17 years.

DEP is currently managing active projects from two previous natural gas incentive programs, the Act 13 Natural Gas Energy Development Program, designed to incentivize the purchase and use of heavy duty natural gas using vehicles, and the 2013 and 2014 Alternative Fuels Incentive Grant (AFIG) program, which was modified in those years to be a companion program to the Act 13 natural gas program to incentivize the use of natural gas use in medium duty and light duty vehicles.

I will provide to you today a brief status of the two aforementioned programs and then detail for you the recently announced the Alternative Fuels Incentive Grant Program for 2016, which also includes incentives for natural gas use in the transportation sector along with other alternative fuels.

In 2012, Chapter 27 of Title 58 (Oil and Gas) authorized DEP to develop program guidelines and to distribute up to \$20 million in grants from the Marcellus Legacy Fund over a period of three years to help pay for the incremental purchase and conversion costs of natural gas fleet vehicles weighing greater than 14,000 lbs.

In total, for all three rounds of the Natural Gas Energy Development Program, 134 Applications were received. Sixty-two projects were competitively selected which resulted in the awarding of all funding which was available. As per the statute, the Natural Gas Energy Development Program ends December 31, 2016 and all awarded funds must be expended by that time.

The 62 Natural Gas Energy Development Program awards provided incentive for the planned the purchase or conversion of:

- 987 Compressed Natural Gas (CNG) vehicles weighing greater than 14,000 lbs.
- 119 Liquefied Natural Gas (LNG) vehicles weighing greater than 14,000 lbs.
- An estimated 13.9 million gasoline gallon equivalents (GGE) of natural gas fuel used annually, displacing petroleum fuel.
- Vehicles supporting 41 new natural gas fueling stations built in PA (38 CNG & 3 LNG). This break down to 20 fueling stations with full public access, 14 fueling

stations with limited/restricted public access, and 7 fueling stations with private access only.

- Vehicles supporting 34 existing stations in PA (30 CNG & 4 LNG). This breaks down to 14 fueling stations with full public access, 13 fueling stations with limited/restricted public access, and 7 fueling stations with private access only

As of the beginning of the year, DEP has reimbursed grantees for the purchase or conversion of 434 heavy duty vehicles under the Act 13 program totaling more than \$8.7 million in program funds disbursed. The 434 vehicles supported to date with grant funds are estimated to be displacing over 5.2 million gasoline gallon equivalents per year. Over \$23.5 million in actual incremental costs have been expended on alternative fuel vehicles due to this program.

DEP will be receiving reports annually for 3 years after project completion to track actual vehicle miles traveled for all vehicles supported with grant funds.

DEP also administers the Alternative Fuels Incentive Grant Program grant to promote the use of alternative fuels in Pennsylvania under the Alternative Fuels Incentive Act, Act no. 178 of 2004. (Act of Nov. 29, 2004, P.L. 1376, No. 178).

As a complimentary program, DEP through the Alternative Fuels Incentive Grant Program provided a grant program in 2013 utilizing the same format as the Natural Gas Energy Development Program only for CNG vehicles weighing less than the 14,000 lbs. gross vehicle weight threshold in the Act 13 Program. AFIG also provided incentives for all other alternative fuel vehicles (propane, electric, etc.) of any weight or size.

The Alternative Fuels Incentive Act requires DEP to establish a formula and method to award Alternative Fuels Incentive Grants and to establish a method to prioritize the grant applications to so as to achieve certain goals and criteria, including the following:

- The improvement of Pennsylvania's air quality.
- The fulfillment of Pennsylvania's responsibilities under the Clean Air Act (69 Stat. 322, 42 U.S.C. § 7401 et seq.).
- The protection of Pennsylvania's natural environment, including land, water and wildlife.
- The advancement of economic development in Pennsylvania and the utilization of the state's indigenous resources.
- The reduction of Pennsylvania's dependence on imported crude oil and other petroleum products.
- The most cost-effective use of private and public funding.
- The transfer and commercialization of innovative alternative energy technologies.

Combined for the 2013 and 2014 years, DEP awarded 63 alternative fuel vehicle purchase or conversion projects resulting in a total award amount of \$6.8 Million. All projects supported no more than 50 percent of the incremental purchase or conversion costs for the vehicles proposed.

The projects awarded resulted in the planned support for the purchase or conversion of:

- Deployment of 649 compressed natural gas fueled vehicles (medium and light duty vehicles).
- Deployment of 559 propane fueled vehicles deployed with no weight limits.

- Deployment of 18 electric fueled vehicles including both plug-in hybrid electric and fully electric vehicles.
- Vehicles supporting 38 new and 64 existing refueling stations in PA (gas, propane and electric).
- Over 3.1 million gasoline gallon equivalents displaced annually.

As of the beginning of this year, DEP has reimbursed grantees for the purchase or conversion of 264 vehicles totaling just over \$1.5 million in program funds disbursed. The 264 vehicles are estimated to be displacing approximately 650,845 gasoline gallon equivalents per year. Over \$3.1 million in actual incremental costs have been expended on alternative fuel vehicles due to this program. DEP will also be receiving reports annually for 3 years after project completion to track actual vehicle miles traveled for all vehicles supported with grant funds. Most remaining projects will be completed within this calendar year.

In February of this year, DEP announced a new round of incentives from the Alternative Fuel Incentive Grant program.

- Eligible Applicants include: School districts, Municipal authorities, and Political subdivisions incorporated nonprofit entities, Corporations, Limited liability companies or partnerships registered to do business in the Commonwealth.

Through the experience of the last several years, we have made some modifications to the Alternative Fuel Incentive Grant program to continue to support natural gas use as an alternative transportation fuel as well as other alternative fuels. One major modification is that we have opened the program for applications to be received throughout the calendar year and have

defined three submission due dates at which projects submitted will be reviewed, scored and awarded. This is in place of one two-month application period/opportunity for potential applicants to arrange and scope projects. Applicants who are not determined to be best, will be notified, given feedback and hopefully will apply again in time for the next submission period with a more robust project. Submission periods are 4 months apart. It is our hope that we will here-to-fore operate the Alternative Fuel Incentive Grant Program as a continuously open program for years to come providing a funding opportunity that is always open and ready to provide assistance to the best project when they are ready to receive assistance which pushes the project over the top with assurances the project will get built.

AFIG will continue providing incentives for natural gas vehicles with some slight modifications as well as offer incentives for natural gas dispensing infrastructure aimed at segments of the transportation sector that we believe are more strategic and local.

The program changes for the Natural Vehicle Retrofit and Purchase projects category are:

- There is no gross vehicle weight rating (GVWR) limit. Vehicles of any size operating on alternative fuels are eligible and there is no minimum number of vehicles required to apply. Previously, there was a minimum project size of 5 vehicles.
- The funding cap for any alternative fuel vehicle project is set at \$200,000. Previous Act 13 projects were capped at \$500,000 and the 2013 and 2014 caps were set at \$300,000 and \$250,000 respectively. No individual vehicle may receive more than \$20,000, as opposed to \$25,000 in prior programs.
- We will support vehicles recently purchased or projects that will guarantee purchase of vehicles within 12 months of the application submission.

- Retrofit and purchase cost incentives will all be 50% of the incremental cost as long as the total grant award is not exceeded.

The Alternative Fuel Incentive Grant Program also plans to support Alternative Fuel Refueling Infrastructure projects (including Natural Gas) including the cost to purchase and install refueling equipment for alternative fuel fleet vehicles and the cost to purchase and install refueling equipment at a vehicle or vehicles' home location.

Fleet Refueling Projects are:

- Installation of refueling equipment which must service at least one existing fleet of alternative fuel vehicles by the end of the period of performance. (24 months)
- A fleet of alternative fuel vehicles must be a group of ten or more vehicles comprised of passenger cars, buses and trucks with a gross vehicle weight rating up to 26,000 lbs. (Class 1 through Class 6 vehicles) owned by a single entity.

Home-Based Refueling Projects are:

- Projects which are deployed at the alternative fuel vehicle(s) home location or base of operation and service at least one alternative fuel vehicle. Home location can be defined as the property location of the owner of the vehicle or the base of operation for the vehicle(s) using the refueling facility.
- Alternative fuel vehicles supporting a home based refueling project may only be passenger cars, light duty trucks, or light heavy duty trucks up to 10,000 lbs. in GVWR (Class 1 and Class 2a and Class 2b)

New refueling facilities and expansion of existing refueling facilities for both Fleet and Home-based location refueling projects will be considered.

These specific funding opportunities and the adjustments identified were to fill critical gaps in the expanding marketplace for natural gas fueling and vehicles which has been growing since 2011, but also has seen a slow down for those who are not the heavy duty and super large fuel consumers due to the price fall of diesel.

From an emissions standpoint, it is important that natural gas vehicles funded by these programs continue to provide emissions benefits, especially when replacing an older conventional vehicle.

An additional opportunity resultant of varied and widespread decentralized alternative fuel refueling capabilities is that other potential uses of alternative fuels then tend to occur such as the replacement of conventional fuel use in smaller applications, such as in forklifts and/or commercial lawn equipment, generators, etc. Because natural gas, propane etc. is a lower-carbon, cleaner-burning fuel, a switch to natural gas and alternative fuels in these applications can result in substantial reductions of hydrocarbon, carbon monoxide, oxides of nitrogen, and greenhouse gas emissions. Emissions from this class of smaller equipment does not have the same tailpipe emissions standards as on-road vehicles and added up, their impacts could be significant

In addition, increasing the use and infrastructure and the number of vehicles consuming this alternative fuels may increase opportunities for renewable natural gas as well. Renewable natural gas, also known as bio methane, is chemically identical to fossil natural gas, yet may yield far fewer GHG emissions during the production process, the blending of relatively small

quantities of RNG with fossil natural gas can provide significant life cycle GHG emission benefits and

Overall, CNG, LNG, Propane etc. are both cleaner-burning fuels and perform well against current vehicle emissions standards. The support of the use of Natural Gas in on road vehicles through the Natural Gas Energy Development Program and the past and current Alternative Fuels Incentive Grant Program will have resulted in millions of gallons of gasoline and diesel fuel displaced in Pennsylvania by the dispensing of cleaner burning indigenous fuels as well as supporting significant alternative fuel infrastructure growth.

I'd like to thank the committee members for their time and the opportunity to present information on our current programs and welcome any questions you may have.