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COMMONWEALTH OF PENNSYLVANIA  
HOUSE OF REPRESENTATIVES

JOINT LEGISLATIVE AIR AND WATER POLLUTION CONTROL  
AND CONSERVATION COMMITTEE

THURSDAY, OCTOBER 1, 2015  
10:00 A.M.

FINLEYVILLE COMMUNITY CENTER  
3547 MARION AVENUE  
FINLEYVILLE, PA

PUBLIC HEARING ON ENVIRONMENTAL BENEFITS  
OF NATURAL GAS VEHICLES

BEFORE: SENATOR SCOTT E. HUTCHINSON, Chair  
SENATOR CAMERA BARTOLOTTA, Member  
REPRESENTATIVE PATRICK J. HARKINS, Member  
REPRESENTATIVE RICK SACCONI, Member  
REPRESENTATIVE JASON ORTITAY, Member

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COMMITTEE STAFF PRESENT:  
TONY M. GUERRIERI  
EXECUTIVE DIRECTOR

## I N D E X

1		
2	OPENING REMARKS	
	By Chairman Hutchinson	4
3	STATEMENT	
	By Representative Saccone	4 - 5
4	DISCUSSION AMONG PARTIES	5 - 9
	TESTIMONY	
5	By David Althoff	9 - 22
	QUESTIONS FROM MEMBERS	22 - 32
6	TESTIMONY	
	By Sherrie Merrow	32 - 45
7	QUESTIONS FROM MEMBERS	45 - 50
	TESTIMONY	
8	By George Stark	50 - 61
	QUESTIONS FROM MEMBERS	61 - 71
9	TESTIMONY	
	By Lutitia Clipper	71 - 78
10	By Susan Oliver-Stough	78 - 84
	QUESTIONS FROM MEMBERS	84 - 94
11	TESTIMONY	
	By Chuck Half	94 - 115
12	QUESTIONS FROM MEMBERS	115 - 120
	CLOSING REMARKS	
13	By Senator Hutchinson	120 - 121
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

## P R O C E E D I N G S

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CHAIRMAN HUTCHINSON: Okay, folks. We're going to get started. Please stand and join me for the Pledge of Allegiance.

PLEDGE OF ALLEGIANCE RECITED.

CHAIRMAN HUTCHINSON: Very good. Good morning. Welcome today to today's public hearing. My name is Scott Hutchinson, the State Senator for the 21st District, as well as Chairman of the Joint Conservation Committee. And we are just pleased to be here today and looking forward to an informational day.

We are here today at the request of a member of our Committee, Representative Rick Saccone of the 39th District. And on behalf of the Committee, I do want to thank Representative Saccone for requesting that we come here today to examine the use of natural gas vehicles in Pennsylvania. In a few moments, I will turn the mic over to him to give a few remarks, but let me proceed.

Since 2008, natural gas from the Marcellus Shale play has become the focal point of our energy debate. Our purpose today is to identify ways to expand the use of Pennsylvania produced natural gas. That includes helping Pennsylvania become the first state in the Nation to make natural gas vehicles commonplace. Support for natural gas

1 vehicles is part of a long-term strategy to create jobs beyond  
2 just natural gas extraction.

3           Representative Saccone has brought to the  
4 Committee's attention that although compressed natural gas  
5 vehicles, CNG, is being used in some corporate fleets of cars,  
6 trucks and busses, this low emission fuel has never caught on  
7 in passenger cars. We are pleased to have some witnesses today  
8 who can hopefully shed some light on that topic. Now, at this  
9 time, I'd like to recognize Representative Saccone to offer a  
10 few comments, and ask to him --- just again, thank you for  
11 having us today. Representative Saccone.

12           REPRESENTATIVE SACCONI: Thank you, Senator  
13 Hutchinson. I just want to thank everyone for coming today.  
14 I'm really excited. We'll put Finleyville on the map here.  
15 It's a lovely town, a hometown environment. And we're glad  
16 that you could all come and experience the hometown feeling  
17 here. I also want to recognize our Mayor, Mayor Mike Kutsek.  
18 Raise your hand there, Mike. There he is. Welcome. And so I  
19 hope you've come feel hospitality.

20           Yeah, I think this hearing is very important. I do  
21 want to thank my colleagues for coming, too. My gosh, they  
22 came a long way. I really appreciate that. And oh, Senator  
23 Bartolotta is here, too. So we're going to have to bring her  
24 down. I think the expansion of these, of our Marcellus Shale  
25 gasses, is vital for the economic growth of our community.

1 From here, we're basically ground zero here in Washington  
2 County. And we want to do everything we can to encourage the  
3 development of using natural gas for vehicles. There's such a  
4 potential here. We've had a number of hearings, other  
5 hearings. The Speaker of the House has had two hearings on  
6 this, so we know there is interest.

7 So we've heard from a number of different  
8 committees, this time more concise. We're going to hear a lot  
9 more of it today and we're going to continue to promote and  
10 celebrate the use of natural gas. So I won't gloat any much  
11 more. We'll get on with the hearing, and I'll turn it back  
12 over to Senator Hutchinson so you can hear all the great  
13 testimonies we have today. Thank you, Senator.

14 CHAIRMAN HUTCHINSON: Thank you, Representative  
15 Saccone. And thank you, Mayor, for welcoming us today. We  
16 appreciate that. At this time, I'd like to have the members of  
17 our panel introduce themselves. They get to say where they're  
18 from and other remarks that they'd like to make at this time.  
19 We'll start with my far left.

20 REPRESENTATIVE ORTITAY: I'm Representative Jason  
21 Ortitay. Can you guys hear me okay? I guess I don't need a  
22 mic, I'm loud enough. I represent parts of Allegheny and  
23 Washington Counties. Of course, I had Southpointe, which is  
24 the headquarters for a lot of the natural gas companies as  
25 well. So I'm invested and interested in hearing this, and I

1 believe it was not too long ago that a speaker had an event up  
2 in Oakdale where we talked about some of the fleets converting  
3 over and some of the services and the infrastructure we need to  
4 make this a reality. So again, happy to be here. Thank you  
5 very much for being here today.

6 MR. GUERRIERI: My name is Tony Guerrieri. I am the  
7 Executive Director of the Joint Legislative Conservation  
8 Committee. And again, I'd like to thank Representative Saccone  
9 for inviting us here today.

10 CHAIRMAN HUTCHINSON: Again, I'm State Senator Scott  
11 Hutchinson, 21st Senatorial District. I come from a couple  
12 hours north of here in the woods in Pennsylvania, and I  
13 represent all part of our five counties here in Western and  
14 Northwestern Pennsylvania.

15 REPRESENTATIVE SACCONI: Again, Representative Rick  
16 Saccone. I represent obviously this area of Washington County,  
17 Northern Washington County, and the Southeastern part of  
18 Allegheny County.

19 REPRESENTATIVE HARKINS: Good morning, everyone.  
20 Pat Harkins. I represent the 1st District up in Erie.

21 SENATOR BARTOLOTTA: I'm Camera Bartolotta, State  
22 Senator for District 46, which includes all of Greene County,  
23 all of Washington County except for Peters Township, and six  
24 municipalities in Beaver County. Right after I was elected, I  
25 requested to be the Vice Chair of the Environmental Resources

1 and Energy Committee, of which I got that appointment, because  
2 we are the heart and soul of the Marcellus Shale industry. And  
3 Greene County is the heart and soul of coal, which needs a  
4 little CPR at the moment. But I'm trying to get the paddles to  
5 do that. So it's great to be here today. Thanks for including  
6 me.

7 CHAIRMAN HUTCHINSON: Okay. Thank you. Before we  
8 begin the formal testimony, I have a couple of housekeeping  
9 reminders. First, I want to notify the witnesses that we do  
10 have a stenographer here with us today, and before your  
11 remarks, please state your name clearly for the record. And I  
12 also want to remind those of us in the panel, as you ask  
13 questions, this is being taped through PCN. And if you could  
14 make sure you are speaking loudly and clearly into the  
15 microphone.

16 And also for those who are not formally testifying  
17 today, if anyone has comments that they would like to submit  
18 for the record, the hearing record will remain open for 30 days  
19 and comments can be sent to the committee, our office in  
20 Harrisburg. And Tony Guerrieri and our staff will be happy to  
21 provide you with contact information if you would like to  
22 submit further comments for the record.

23 With that, I believe we're ready to go. And I will  
24 now call our first witness, and that's Mr. David Althoff, the  
25 Environmental Group Manager of Pennsylvania Department of

1 Environmental Protection. Mr. Althoff, welcome to today's  
2 hearing and we're pleased to have you. And we are ready to go  
3 when you are ready.

4 MR. ALTHOFF: Good morning. Can everybody hear me?  
5 Fine, thanks.

6 CHAIRMAN HUTCHINSON: I'm looking at the stand,  
7 so ---.

8 SENATOR BARTOLOTTA: Do you want the mic on the  
9 stand?

10 CHAIRMAN HUTCHINSON: Does he need to hold it  
11 or ---?

12 MR. ALTHOFF: Just talk, I'll be fine. Good, thank  
13 you. Good morning. My name is Dave Althoff. I work for the  
14 Pennsylvania Department of Environmental Protection in the  
15 Office of Pollution Prevention and Energy Assistance. I've  
16 worked for the Department almost 23 years, 17 of it in the  
17 Energy Office. The Office of Pollution Prevention and Energy  
18 Assistance is essentially considered the state energy office in  
19 the eyes of the Department of Energy, and we implement State  
20 programming.

21 AUDIENCE MEMBER: We're having trouble hearing in  
22 the back. Could you turn that up for me?

23 MR. ALTHOFF: Okay. Can you hear me now? All  
24 right. Good morning, Chairman Hutchinson and members of the  
25 Committee. Thank you for the opportunity to appear before you

1 today and present information about the ongoing activities  
2 regarding CNG fleet vehicle purchasing and conversion in  
3 Pennsylvania. As you may recall, in 2012 Chapter 27 of Title  
4 58 established the Natural Gas Energy Development Program to  
5 award grants to promote the use of domestic natural gas vehicle  
6 fuel in Pennsylvania. Chapter 27 authorized DEP to develop  
7 program guidelines and distribute up to \$20 million in grants  
8 from the Marcellus Legacy Fund over a period of three years to  
9 help pay for the incremental purchase of diversion costs of  
10 natural gas fleet vehicles weighing greater than 14,000 pounds.

11           As some background, an outreach strategy was  
12 undertaken by DEP in my office to provide workshops across the  
13 State. Approximately six of those workshops occurred to  
14 essentially ensure consistent information about the program  
15 that was available and to encourage widespread participation.  
16 The workshops included information on vehicle technologies,  
17 fueling strategies, methods for assessing natural gas  
18 opportunities and general guidelines for accessing the Natural  
19 Gas Energy Development Program funds. DEP also opened a  
20 Natural Gas Energy Development Program website on June 4th,  
21 2012 to further help those who were interested in deploying  
22 natural gas using vehicles in Pennsylvania.

23           As key elements of the Natural Gas Energy  
24 Development Program, some of these were in the statutes, some  
25 of these were a part of what we put together as parts of the

1 program. Each project must propose to receive funding for five  
2 or more eligible vehicles. We were looking to create a group  
3 of vehicles that would come in for an application relative to  
4 either putting together projects from various different  
5 companies or fleet vehicles from one company. As I stated  
6 before, vehicles must have a gross weight of greater than  
7 14,000 pounds, which we were going for medium or large vehicles  
8 for the use of the CNG fuel. Vehicles utilizing incremental  
9 purchase or retrofit costs must be registered in Pennsylvania  
10 and stay registered in Pennsylvania for a period of up to six  
11 years. Each grant could not cover more than 50 percent with  
12 the incremental purchase cost or provide no more than \$25,000  
13 for each eligible vehicle.

14 Eligible vehicles include purchased or retrofitted  
15 new or used vehicles, so it just wasn't to purchase a new  
16 vehicle. You could retrofit used vehicles, which was very  
17 important in the program. We saw a number of vehicles that  
18 were retrofitted. Grantees would not receive incremental cost  
19 for a vehicle purchase or retrofitted prior to the dates  
20 specified in the documents. So the idea of a furlough was to  
21 incentivize the retrofit and purchase of vehicles going  
22 forward, not necessarily to incentivize vehicles that had  
23 already been retrofitted or converted years prior. Grant funds  
24 could not be used in place of Federal funds. That was one of  
25 the specific caveats within this statute.

1           On December 1st, 2012, DEP made \$10 million  
2 available for competitive applications. And of that amount, \$5  
3 million was allocated exclusively for local transportation  
4 organizations as required by Act 13. Moving forward, in  
5 November 2nd, 2013, DEP made \$11.1 million available from the  
6 \$20 million for competitive grant applications. Fifty (50)  
7 percent of that \$11.1 million was allocated exclusively for  
8 local transportation organizations as required by Act 13. Then  
9 lastly, on August 30th, 2014, \$6 million was made available for  
10 competitive grant applications. For the final opportunity,  
11 there was not a specific allocation exclusively for local  
12 transportation organizations, as this was the third and final  
13 round.

14           You'll note that the award offerings for the three  
15 rounds totaled greater than \$20 million. So this was due to  
16 several factors, and that's what I'm sort of leading towards.  
17 Less than \$3 million was awarded to local transportation  
18 organizations in the first two rounds. Specifically the set  
19 aside funds in rounds one and rounds two were underutilized  
20 because we simply did not receive enough applications from  
21 local transportation organizations. To fulfill and set aside  
22 the \$5 million in round one, more than 50 percent of the  
23 eligible funds in round two. Additionally, several grantees,  
24 and I would state these as non-local transportations  
25 organizations, which were awarded funds in round one and round

1 two decided to postpone the report with their awards and  
2 forfeited their grant awards. So those awarded funds were then  
3 rewarded in subsequent grant rounds.

4           So that's the reason why the amounts that were  
5 offered in the three rounds totaled greater than the \$20  
6 million, as essentially we were recycling those funds back into  
7 the pot. So in total for all three rounds of the Natural Gas  
8 Energy Development Program, we received 134 applications. We  
9 selected 62 projects competitively, which has resulted in the  
10 award as we sit here today of all \$20 million available minus  
11 the \$200,000 which was approved for program administration use.  
12 So \$19.8 million has been awarded.

13           The Natural Gas Energy Development Program awards  
14 have resulted in the planned support of the purchase or  
15 conversion of 987 compressed natural gas vehicles weighing  
16 greater than 14,000 pounds, 119 liquified natural gas vehicles  
17 weighing greater than 14,000 pounds. This resulted in  
18 estimated 13.9 million gasoline gallon equivalents of natural  
19 gas to be used annually displacing petroleum fuel in  
20 Pennsylvania. Vehicles which we are supporting essentially are  
21 supporting the use of 41 new natural gas fueling stations being  
22 built in Pennsylvania. It breaks down to 38 CNG stations and  
23 three LNG stations. This further breaks down to 20 fueling  
24 stations with full public access, 14 stations with limited or  
25 restricted public access and the membership cards, and seven

1 fueling stations with private access only. The vehicles  
2 supporting the 34 existing stations in Pennsylvania, 30 CNG and  
3 4 LNG, breaks down to 14 existing stations with full public  
4 access, 13 with limited restricted public access, and 7 fueling  
5 stations with private access only. So we have a nice sort of  
6 sloth of both public, limited and private stations, both on  
7 existing and new across the State that we are supporting.

8           Today, DEP has reimbursed grantees for the purchase  
9 or conversion of 256 heavy duty vehicles. So we only provide  
10 reimbursement when they purchase the vehicles, they registered  
11 the vehicles, we go out and actually see the vehicles. 256  
12 heavy duty vehicles totaling more than \$5.3 million in program  
13 funds dispersed. The 256 vehicles supported are estimated to  
14 be displacing over 3.9 million gasoline gallon equivalents per  
15 year. Over \$14.3 million in actual incremental costs have been  
16 expended to date on the alternative fuel vehicles due to this  
17 program. So we've reimbursed \$5.3 million. There's been \$14.3  
18 million additional incremental cost dollars expended on the 256  
19 vehicles to date.

20           DEP, as a condition of the grant, will be receiving  
21 reports annually for three years after project completion. So  
22 after they have purchased or converted all of their vehicles,  
23 we will receive annual reports for three years after the  
24 completion of their project for the purposes of tracking actual  
25 vehicle miles traveled, that the vehicles are still operating

1 in Pennsylvania, that they're still registered in Pennsylvania.  
2 And so therefore, we can follow where they're fueling as well,  
3 tied to their anchor fueling station.

4           As a complementary program, DEP through the  
5 Alternative Fuels Incentive Grant Program in 2003 provided  
6 grant program also for alternative fuel vehicles, utilizing the  
7 same format as the Natural Gas Energy Development Programs,  
8 only we did this program for CNG vehicles weighing 14,000  
9 pounds or less, as well as for all other alternative fuel  
10 vehicles of any weight or size. Meaning electric, propane, we  
11 would look at those as a part of the Alternative Fuels  
12 Incentive Grant Program. I would note that we amended the  
13 program for 2014. Rather than being 14,000 pounds or less, we  
14 made it 26,000 pounds or less. This was because there seemed  
15 to be a bit of a no man's land related to vehicles that were  
16 14,500 pounds, such that they were not as competitive in the  
17 Natural Gas Energy Development Program, but they were just  
18 above the 14,000 pound cutoff. So we amended the program in  
19 2014 to help include those vehicles that were right around the  
20 14,000 pound total.

21           As some background, DEP administers the Alternative  
22 Fuels Incentive Grant Program to promote the use of alternative  
23 fuels in Pennsylvania under the Alternative Fuels Incentive  
24 Act. And DEP, specifically the Energy Office in DEP, has been  
25 administering this program for over 20 years. The Alternative

1 Fuels Incentive Act requires DEP to establish a formula and  
2 method to award the Alternative Fuels Incentive Grant program  
3 grants. We are also required to establish a method to  
4 prioritize grant applications to achieve the identified goals  
5 and criteria in a competitive format. And these are the  
6 criteria; improvement of Pennsylvania's air quality, fulfilment  
7 of Pennsylvania's responsibilities under the Clean Air Act,  
8 protection of Pennsylvania's natural environment, including  
9 land, water and wildlife, advancement of economic development  
10 in Pennsylvania and the utilization of the State's indigenous  
11 resources, the reduction of Pennsylvania's dependence on  
12 imported crude and other petroleum products, the most cost  
13 effective use of private and public funding, and the transfer  
14 and commercialization of innovative alternative energy  
15 products. And as you can see, given these vehicle projects,  
16 it's firmly within those goals and criteria.

17           So on May 25th, 2013, and then again on March 1st,  
18 2014, DEP opened the Competitive Alternative Fuels Incentive  
19 Grant Program solicitation specifically for the purpose of  
20 supporting the incremental cost of conversion of new or  
21 existing vehicles to operate on alternative fuels. Combined  
22 for the two rounds, DEP awarded 63 alternative fuel vehicle  
23 purchase or conversion projects, resulting in a total award  
24 amount for both rounds of \$6.8 million. All projects supported  
25 again no more than 50 percent of the incremental purchase

1 toward the conversion cost or the vehicles proposed. Those  
2 vehicle projects are expected to result in 649 compressed  
3 natural gas fuel vehicles, medium and light duty vehicles, the  
4 deployment of 559 propane fueled vehicles deployed with no  
5 weight limits, but there really are not any propane vehicles  
6 that are 14,000 pounds or greater --- or 26,000 pounds or  
7 greater, the deployment of 18 electric fueled vehicles, both  
8 plug in hybrid and fully electric vehicles, and the support of  
9 38 new and 64 existing refueling stations in PA gas, propane,  
10 and electric. We had estimated over 3.1 million gasoline  
11 gallon equivalents will be displaced annually when all of the  
12 vehicles are deployed.

13           So far, DEP has reimbursed grantees for the purchase  
14 or conversion of 212 vehicles, totalling just over \$1.2 million  
15 in program funds dispersed. The 212 vehicles estimate to be  
16 displacing currently over 500,000 gasoline gallon equivalents  
17 per year. And grantees have spent over \$2.4 million in  
18 incremental costs in addition to the program incentives paid on  
19 the alternative fuel vehicles to date. DEP, just like the  
20 Natural Gas Energy Development Program for AFIG will also be  
21 receiving reports annually for three years after project  
22 completion to track actual vehicle miles traveled, make sure  
23 the vehicles are still registered in Pennsylvania, and that  
24 they're utilizing anchor fueling facilities in Pennsylvania.

25           DEP through implementing the two programs has

1 experienced what I would say is few substantial issues with  
2 regards to implementing the Natural Gas Energy Development  
3 Program and the Alternative Fuels Incentive Grant Program for  
4 the support of the vehicle fleet. Some themes, however, have  
5 become apparent while overseeing the program. A few of the  
6 awarded projects have returned funding due to the fall in  
7 gasoline and diesel prices since 2012 and 2013. Lower gasoline  
8 and diesel prices have increased the incremental cost payback  
9 period for vehicles purchased that are using CNG or LNG.  
10 Several folks have returned project funds to us specifically  
11 citing that reason. A few projects have also experienced  
12 issues with conversion companies promising but not being able  
13 to deliver EPA compliant conversion systems within reasonable  
14 time frames. Mainly, this issue has caused delay and  
15 additional efforts by our grantees to find a supplier with  
16 available EPA compliant conversion systems within the period of  
17 performance.

18           We have observed for the heavy duty market segment,  
19 several companies were repeat applications in each round. So  
20 for the Natural Gas Energy Development Program, there were  
21 several companies which were applicants for round one, for  
22 round two, and for round three to sort of continue to convert  
23 vehicles within their fleet. This resulted in sort of a field  
24 of awardees, which were not quite as diverse as we had  
25 anticipated or that we had sort of observed during our

1 beginning workshop and outreach series.

2           While I do not have specific numbers to cite at this  
3 point, it does seem that fueling stations which were put in  
4 place to specifically support and anchor fleet in either a  
5 privately or semi-private manner have been installed and  
6 operated in a much more expeditious fashion than those which  
7 were intended to be fully public. The use of some public  
8 stations, which were proposed to support the fleet for which  
9 incremental costs were sought, usually require more than just  
10 the anchor fleet for which we were providing incentive for to  
11 provide the needed gasoline gallon equivalence to make the  
12 station economic. Those stations ultimately required  
13 additional proposed partners for the station to be built. And  
14 in some cases, this has caused the fleet of which we were  
15 providing incentive to seek out other fueling options because  
16 the public stations have not yet been built, yet they were  
17 ready to purchase vehicles and move forward.

18           As the incremental price between diesel or gasoline  
19 and CNG and LNG decline, a few of those projects tied to public  
20 fueling stations have then decided not to follow through with  
21 the transition to CNG or LNG. Looking forward, DEP is  
22 currently considering the opportunities for the next round of  
23 the Alternative Fuels Incentive Grant Program. Without the  
24 benefit of further Act 13 funds or the ability to utilize the  
25 Natural Gas Energy Development Program funds, which would come

1 back to us after December 31st, 2016, DEP may consider  
2 including heavy duty CNG and LNG vehicles within the eligible  
3 Alternative Fuels Incentive Grant Program projects going  
4 forward.

5           With regard to the existing vehicle conversion  
6 programs and the documentation of specific air and  
7 environmental benefits, the Natural Gas Energy Development  
8 Program nor the Alternative Fuels Incentive Grant Program does  
9 not include funding for conducting any specific studies related  
10 to the air quality benefits associated with the conversion of  
11 the commercial vehicles to CNG or LNG supported grant programs.  
12 But information on this topic, however, is provided on US DOE's  
13 alternative fuels data center website. Several studies can be  
14 found on this site which concludes that natural gas when used  
15 as a vehicle fuel can offer life cycle greenhouse gas emissions  
16 benefits over conventional use depending on the vehicle type,  
17 drive site and engine calibration.

18           For instance, Argonne's National Laboratory  
19 Greenhouse Gases, Regulated Emissions, and Energy Use in  
20 Transportation Model, the GREET Model, estimates the life  
21 cycle, petroleum use, and greenhouse gas emissions of light  
22 duty vehicles running on compressed natural gas and liquified  
23 natural gas. Based on this model, natural gas emits  
24 approximately 6 to 11 percent lower levels of greenhouse gasses  
25 in gasoline improving the fuel life cycle. EPA does, however,

1 state that due to increasingly stringent emissions regulations,  
2 the gap has narrowed between tailpipe emissions from natural  
3 gas vehicles to conventional vehicles with modern emission  
4 controls. It is important to note that natural gas vehicles  
5 continue to provide emission benefits, especially when  
6 replacing older conventional vehicles, which is normally the  
7 case that we see when an entity purchases a new commercial  
8 fleet type vehicle.

9           Another opportunity that natural gas may also be  
10 used is to replace gasoline in smaller applications such as  
11 forklifts or commercial lawn equipment. Because natural gas is  
12 a lower carbon, cleaner burning fuel, a switch to natural gas  
13 in these applications can result in substantial reductions of  
14 hydrocarbon, carbon monoxide, oxides of nitrogen, and  
15 greenhouse gas emissions from this type of equipment, as those  
16 pieces of equipment do not have the same tailpipe emission  
17 standards as on road vehicles. Because renewable natural gas,  
18 also known as biomethane, is chemically identical to fossil  
19 natural gas, biomethane together with natural gas may yet yield  
20 far fewer greenhouse gas emissions during the production  
21 process than blending a relative --- burning production  
22 process. The blending of relatively small quantities of RNG,  
23 renewable natural gas, with a fossil natural gas can provide  
24 significant life cycle greenhouse gas emission benefits.

25           Overall, CNG and LNG are both cleaner burning fuels

1 and perform well against current vehicle emission standards.  
2 The support of the use of natural gas in on road vehicles due  
3 to the Natural Gas Energy Development Program and the  
4 Alternative Fuels Incentive Grant Program will have resulted in  
5 millions of gallons of gasoline and diesel fuel displaced by  
6 this cleaner burning indigenous fuel from Pennsylvania. These  
7 projects have also provided support for the growth of both CNG  
8 and LNG fueling infrastructure in the State.

9           So with that, I'd like to thank the Committee for  
10 their time and attention. And I'd be happy to answer any  
11 questions.

12           CHAIRMAN HUTCHINSON: Thank you for your testimony.  
13 I'll look to the panel. Any questions from panel members?

14           REPRESENTATIVE ORTITAY: Sure.

15           CHAIRMAN HUTCHINSON: Representative?

16           REPRESENTATIVE ORTITAY: When you were talking about  
17 the application --- the application rounds, it seemed like  
18 there weren't enough applications to actually fulfil the grant  
19 obligation. Is there a reason behind that or anything you guys  
20 found? Was it an awareness issue?

21           MR. ALTHOFF: There was enough applications to  
22 fulfil the grant round, except for we set aside for the local  
23 transportation organizations. And so as we could not utilize  
24 that funding for the local transportation organizations, we  
25 roll forward into the next round, we roll forward into the next

1 round. We certainly had enough applications in the last round  
2 for \$6 million, such that when some folks have returned funding  
3 back to us, we have gone back to essentially that application  
4 list and next man up provided the funding.

5 I believe, however, with regards to the local  
6 transportation organizations, they take a longer planning  
7 period relative to their budgeting process, relative to when  
8 they're going to change up busses. And so there's Federal  
9 funds involved as well with those types of projects, and they  
10 just did not seem to have enough time to be prepared relative  
11 to purchasing those heavy duty CNG or LNG vehicles within the  
12 time frame.

13 REPRESENTATIVE ORTITAY: Thank you.

14 MR. ALTHOFF: That's my opinion.

15 CHAIRMAN HUTCHINSON: Another question from Senator  
16 Bartolotta.

17 SENATOR BARTOLOTTA: I don't know if I'll be able  
18 to ---.

19 MR. ALTHOFF: I can hear you.

20 SENATOR BARTOLOTTA: Okay. But I actually have a  
21 lot of technical questions, you know, dealing with engine,  
22 size, weight, all those other things. But I'm hoping that  
23 somebody later on will --- later on might give the answer to  
24 those. But as far as the delay that you were talking about,  
25 with EPA, granting and allowing these places to go ahead and

1 retrofit and things like that, how ---?

2 MR. ALTHOFF: The EPA was one of the conversion  
3 systems there.

4 SENATOR BARTOLOTTA: Right. So I mean, isn't that  
5 standardized compliant conversion, that everybody has to  
6 follow, or do you notice the differences in the areas?

7 MR. ALTHOFF: EPA essentially has a list of  
8 compliant conversion systems. And there's a process for new  
9 conversion systems to go through with EPA to essentially have  
10 them registered. As with anything relative to EPA and Federal  
11 Government, State Government, things take time. I think there  
12 were several vendors who potentially overpromised and under  
13 delivered with some of their clients in saying that they were  
14 going to utilize this system, they were going to get it passed  
15 by EPA, it was going to be compliant, signed contracts to do  
16 the work, and then ultimately were not able to deliver those  
17 EPA compliant systems for whatever reason. And so that to some  
18 degree has held up some projects. I don't think it has  
19 rendered some projects not to happen. It has just caused a  
20 longer delay in getting those vehicles on the road until they  
21 essentially found another vendor to provide an EPA compliant  
22 system.

23 Another thing I would say is that we had the idea at  
24 the beginning of this in 2012 that if you build it, they will  
25 come, and so folks will want to purchase vehicles, folks will

1 want to convert vehicles, and the equipment would be there and  
2 it would be ready. And as it turned out, there was essentially  
3 an order list for this equipment, whether it was with the  
4 Cummins Westport or whether it was with conversion companies.  
5 And the stuff was not necessarily on the shelf ready to go.  
6 Folks made downpayments, folks potentially waited for them to  
7 build the engine or build the vehicle and then convert the  
8 vehicle.

9           A lot of times what happens with new vehicles, they  
10 build it as a diesel vehicle and then they upped it after it  
11 rolls off the line. And so if the parts and pieces are not  
12 there ready to go, it causes a delay and things just do not  
13 happen very fast.

14           SENATOR BARTOLOTTA: Well, I do know that there was  
15 also an issue with the Briggs and Stratton CNG engines that  
16 they had out there, for example, for conversion likes.

17           MR. ALTHOFF: Uh-huh (yes).

18           SENATOR BARTOLOTTA: It was an issue, and they were  
19 working fine in areas that were flat in Texas and things like  
20 that. You come to Pennsylvania, you've got all these hills and  
21 everything else and rolling terrain, and that was a real issue.  
22 So I think Briggs and Stratton had a huge problem with those  
23 engines originally. They were dying out, they were locking up,  
24 they gave us some problems. So I think we're just trying to  
25 catch up with technology.

1           MR. ALTHOFF: Right. And we've definitely seen  
2 this, and this is a good idea as well. Some folks who let's  
3 say were going purchase ten vehicles; they would purchase one  
4 or two, and then they would drive them and see how they worked  
5 before they purchased the other eight. And then they would  
6 sometimes --- you know, it would have an issue or they would  
7 learn how to maintain those vehicles. And so the projects did  
8 not happen quickly, and in some cases they didn't like the  
9 vehicles. And so you know, they were like okay, well, that was  
10 two. We would like to now not do the other eight.

11           SENATOR BARTOLOTTA: Not do the other eight.

12           MR. ALTHOFF: So that's just part --- I would say  
13 that that's kind of how some projects go. And I would also  
14 note this, as I said, I've been with the Energy Office for 17  
15 years and I've been involved in a lot of grant programs. I  
16 would say this. There hasn't been a grant program that I've  
17 been involved with that didn't have at least a 10 to 15 percent  
18 failure base.

19           SENATOR BARTOLOTTA: Uh-huh (yes).

20           MR. ALTHOFF: You know, folks look to do a project,  
21 scope a project, and then it turns out it's not going exactly  
22 how they thought, or the economics changed relative to what  
23 they proposed six months down the road or eight months down the  
24 road. That's kind of how it goes. So I don't want to alarm  
25 you to say that some projects didn't work out, but I think it's

1 constructive to understand some of the reasons behind that and  
2 why things maybe didn't happen as that. But we have a lot of  
3 really good projects, and we have a lot of projects that are  
4 going to continue to happen. And I think some of the bugs in  
5 the system are being worked out, including who really has the  
6 equipment that works and who doesn't.

7 SENATOR BARTOLOTTA: As you go through the testing  
8 phase, how many school busses or how many school districts have  
9 come to get the requirements?

10 MR. ALTHOFF: There's been a couple. And you know,  
11 they're mainly in the Southeast and the Northwest,  
12 interestingly. And these were normally the school districts  
13 that were already utilizing biofuels and biodiesel. So what  
14 we've sort of seen is that those folks who are ---.

15 SENATOR BARTOLOTTA: You don't find so much ---.

16 MR. ALTHOFF: Those folks who were sort of  
17 innovative to begin with were willing to step in there.  
18 Interestingly, we've seen a number of propane school busses as  
19 well, and a couple of school bus fleet owners are getting  
20 involved in that with a Blue Bird process. So it's not just  
21 CNG. There's plenty of options there as well.

22 SENATOR BARTOLOTTA: But I'm sure in the office, you  
23 have some experts that people can use as a resource that can  
24 guide you through the steps, or who to contact, or some kind of  
25 resources ---.

1           MR. ALTHOFF: I wish they kind of knew about that.  
2 I wish they kind of knew. You know, we work with --- our  
3 office in Harrisburg is a very small office, and we have a  
4 regional manager in each of the six DEP regional offices. And  
5 so essentially, there are outreach folks, our boots in the  
6 ground, and the folks who project advise and oversee the  
7 forming of our grant projects. So by involving with these  
8 projects, they're knowledgeable on the subject and can provide  
9 assistance related to what we've learned and how we've got that  
10 seed on the alternative fuel system.

11           SENATOR BARTOLOTTA: One last question before I pass  
12 it off. You were saying about the number of the CNG and LNG  
13 stations available and that they're for profit of the long run.

14           MR. ALTHOFF: Yeah.

15           SENATOR BARTOLOTTA: It would be like the chicken  
16 and an egg kind of thing. Is anyone going to really invest  
17 thousands of dollars to retrofitting their equipment if they  
18 can't refuel somewhere, if their either delivery or their  
19 service area is confined to where they can refuel? But it's  
20 nice to see that they are popping up. Is there any kind of a  
21 grant program for a company that they might to install a new  
22 refueling station somewhere? Is it strictly for the vehicles?

23           MR. ALTHOFF: All right. The Natural Gas Energy  
24 Development Program, the program that we implemented, was only  
25 to provide dollars on the vehicle side of the equation. One of

1 the caveats that we actually put in that program was is that  
2 you identify fueling facility in Pennsylvania to be your anchor  
3 fuel facility --- now we all know that some of these guys when  
4 they're out driving, they're going to use two or three  
5 different fueling facilities and some of them out of state,  
6 because they do drive these vehicles out of state. And that's  
7 why we wanted an anchor facility identified in Pennsylvania,  
8 which they would mainly use.

9           And I think that worked very well. I do not have  
10 the numbers, we've been working on them. But I'll just  
11 estimate. I think in 2012 before we started this program,  
12 maybe might have been less than 20 fueling facilities in  
13 Pennsylvania. Now, as we sit here today relative to facilities  
14 that are constructed, facilities that are under construction,  
15 facilities that are still proposed, we're getting towards a  
16 hundred. It's a significant amount in putting a lot of  
17 imprints on the map relative to creating that less anxiety  
18 relative to hey, if I had this anchor facility that would be my  
19 own facility, or my own semi-private or private facility, when  
20 I drive 400 miles away, am I going to be able to find fuel in  
21 order to get home when I'm doing that trip?

22           The Alternative Clean Energy Program with the  
23 Commonwealth Financing Authority over at DCD, they've provided  
24 funding for a number of fueling facilities in Pennsylvania. I  
25 don't have the number, but 20 to 30 at least. And some of

1 those fueling facilities typically are some of the same  
2 facilities of which we are providing the cost for the anchor  
3 fleet for those new fueling facility locations.

4 SENATOR BARTOLOTTA: Thank you very much.

5 MR. ALTHOFF: Yes.

6 CHAIRMAN HUTCHINSON: Representative Harkins, you're  
7 next.

8 REPRESENTATIVE HARKINS: Thank you for your  
9 testimony. I just wanted to ask who are your primary grant  
10 recipients? Who is using the program?

11 MR. ALTHOFF: Okay. Generally, I would say waste  
12 selling firms, some regional trucking --- as a matter of fact,  
13 I passed on the Turnpike going out through here, Sheeting Nail  
14 (phonetic), which I remembered, which I didn't know who they  
15 were before. But I passed one of their trucks, and I was  
16 looking to see if it was a CNG truck when I was driving by. So  
17 regional haulers, FedEx, you know, UPS; it's the big guys that  
18 you would recognize, Waste Management, those types of folks who  
19 are sort of our main trucking, our main sort of applicants.

20 REPRESENTATIVE HARKINS: I was a driver for UPS for  
21 25 years before this gig, so ---.

22 MR. ALTHOFF: Giant Eagle --- Giant Eagles are ---  
23 you know what I mean.

24 REPRESENTATIVE HARKINS: Have you delved into any  
25 new electric vehicles?

1           MR. ALTHOFF: Yes. Ultimately, we've been providing  
2 funding for electric vehicle infrastructure through the  
3 Alternative Fuels Incentive Grant Program. And I think that if  
4 you look at the alternative fuels data center website, DOE's  
5 website, you should really have the best place to go for ---  
6 they have a contractor that basically goes through, and through  
7 the clean cities organizations, they track alternative fueling  
8 facilities in Pennsylvania. But there we have about 212 or 225  
9 electric vehicle --- for lack of a better term EPSE, electric  
10 vehicle stations. However, our Alternative Fuels Incentive  
11 Grant Program has incentivized about half of those over the  
12 years.

13           When we put out this from the Alternative Fuels  
14 Incentive Grant standpoint, the vehicle incremental cost, we  
15 were most surprised to receive a fleet of electrical vehicles  
16 as one of the applicants, and it actually came from DPL. And  
17 so DPL was putting in a fleet of Chevy Volts and installing  
18 electrical vehicle charging at each one of their locations  
19 within their service territory. So while we normally don't see  
20 electric vehicles as a part of a fleet, I think we're going to  
21 start seeing that, especially maybe with some municipalities,  
22 you know, who are water authorities, who are folks going out to  
23 read meters and things like that, the plug in --- the typical  
24 plug in hydroelectric vehicles. So we were happy to see that,  
25 and we're going to start looking towards providing incentive

1 relative to electric vehicles.

2           REPRESENTATIVE HARKINS: And one final thought just  
3 on marketing. You could make it more aware, I think, to ---  
4 like in my area here and other places, there are some  
5 businesses that are making connection with Harrisburg buyers.  
6 But I just don't think the public is aware of what's out there.  
7 We can overcome that if we just make the public ---.

8           MR. ALTHOFF: Sure.

9           CHAIRMAN HUTCHINSON: Representative Saccone?

10           REPRESENTATIVE SACCONE: Yes, thank you. So how  
11 many EPA compliant merchant companies do we have, and how many  
12 of those are in Pennsylvania? I understood that we had some  
13 main electric facilities right here in Pennsylvania? Quite  
14 frankly, what's the merchant case?

15           MR. ALTHOFF: I have to say I don't know the answer  
16 to that question specifically. And I just have to say that I  
17 think that's right.

18           REPRESENTATIVE SACCONE: Thank you.

19           CHAIRMAN HUTCHINSON: Thank you, Mr. Althoff. We  
20 appreciate your testimony.

21           MR. ALTHOFF: Sure.

22           CHAIRMAN HUTCHINSON: We will next move to Sherrie  
23 Merow, LNG/CNG Development Advisor for Noble Energy. Sherrie?  
24 And you're welcome to start whenever you're ready.

25           MS. MERROW: Chairman Hutchinson, Representative

1 Saccone and members of the Committee, it's my pleasure to be  
2 here today and to talk with you about the tremendous  
3 opportunity that Pennsylvania has to increase the utilization  
4 of one of its key energy assets, natural gas. As the second  
5 largest natural gas producer in the nation, Pennsylvania  
6 recognizes that using more of its natural gas assets, including  
7 the increased use of natural gas as a transportation fuel, is  
8 important for the state's economy and air quality.

9           By way of introduction, I am Sherrie Merrow, a  
10 consultant for both NGVAmerica and Noble Energy. I have worked  
11 in the natural gas vehicle industry for six years and in the  
12 oil and gas industry for most of my career. I have been the  
13 Chair of the National NGVAmerica State Government Advocacy  
14 Committee for the last six years and we have six regions that  
15 we work with our members and their representatives in helping  
16 to promote natural gas vehicle policy across the Nation.

17           NGVAmerica is the greatest national trade  
18 organization dedicated to the development of a growing,  
19 profitable, and sustainable market for vehicles powered by  
20 natural gas or renewable natural gas, and represents the full  
21 value chain of the industry, including more than 200 companies,  
22 environmental and government organizations interested in the  
23 promotion and use of natural gas as a transportation fuel.  
24 Noble Energy is a leading independent energy company engaged in  
25 worldwide oil and natural gas exploration and production. In

1 Pennsylvania's Marcellus Shale region, Noble Energy's core  
2 operational and exploratory area is in Washington and Greene  
3 Counties, and includes 350,000 net acreage with a second order  
4 of 2015 net production at 427 billion cubic feet equivalent per  
5 day. Since beginning its Marcellus operations in 2012, nearly  
6 90 percent of Noble's Marcellus employees were hired  
7 regionally.

8           So I do represent those two companies, speaking on  
9 behalf of them today. The rest of the document is written so  
10 that you can read it at any point in time. What I'd like to do  
11 now is get a little more into just talking to some of the  
12 graphs and stating highlights. I think much of this  
13 information is in here, too. But basically, the document takes  
14 on an oil and gas industry look at the benefits of natural gas  
15 vehicles and natural gas in the top rates. I think that's ---.

16           SENATOR BARTOLOTTA: It's hard to hear you in the  
17 back.

18           MS. MERROW: Is it?

19           SENATOR BARTOLOTTA: We've got too many microphones  
20 too close together. Could you shut these off until we're using  
21 them? That might help a little bit.

22           MS. MERROW: Okay. So if we look at the benefits,  
23 natural gas is abundant, cost effective, reduces emissions, and  
24 provides energy security. The first point that I'd like to  
25 make is that the abundance estimated by the Potential Gas

1 Committee as of the year 2014 shows that we have more than  
2 2,500 trillion cubic feet of natural gas. What that really  
3 means in things we can understand is more than 115 years  
4 supply, and we're heading for that everyday. And when the  
5 price of oil goes back up, we'll want it even more, so ---  
6 there's a chart there that shows the basins and should be  
7 helpful to you. Again, this here you probably are well aware  
8 of.

9           On the benefits, just as a description, natural gas  
10 is an odorless, colorless, non-toxic, non-corrosive source of  
11 energy that is abundant and produced in the U.S. When used as  
12 a fuel for vehicles, it's cost effective, clean, quiet,  
13 providing an excellent alternative to gasoline and diesel.  
14 Natural gas is used in a vehicle fuel in two forms, compressed  
15 natural gas, CNG, and liquified natural gas, LNG. It is  
16 dispensed in gasoline or diesel gallon equivalents often  
17 referred to as GGE's or DGE's and provides the same miles per  
18 gallon as the equivalent diesel or gasoline gallon.

19           So from a cost effective perspective, natural gas  
20 prices used to have maybe \$1.50, \$2 per gallon differentials  
21 lower. And a large part of that is because the actual cost of  
22 the fuel, base fuel, is much lower than the cost of gasoline or  
23 diesel as a base fuel. You have singular taxes and otherwise  
24 transports and such down the line. But if you look at the  
25 price today, obviously we're much closer. But when fleets

1 negotiate contracts, they still are getting into that 80 cent  
2 to \$1.40 off range, you know, a savings.

3           So your UPS's, your Frito Lays, you Waste  
4 Managements, even those with five to ten vehicles really can  
5 realize that's the savings. And in talking with Ryder and all  
6 of the above and a variety of people at the recent NGVAmerica  
7 conference, they're continuing full speed ahead with the  
8 conversions of their vehicles. They see that the recognized  
9 value, it's not as great today as it will be tomorrow or it was  
10 yesterday. But we have relatively aggressive gas and oil that  
11 will not go away. And while oil prices are down today, they'll  
12 be back up.

13           One of the things that we also have this --- I  
14 wanted to present the use of natural gas in our oil and gas  
15 operations. So this is just an illustrative diagram with the  
16 two crucial parts here. But when we're running a rig for  
17 drilling, we can save anywhere from \$25,000 to \$1,750,000 by  
18 running that rig for the life of drilling the well. The reason  
19 that's true is you're either pushing LNG coupled with diesel,  
20 so a dual fuel scenario, or we're all the way up to running  
21 almost pure LNG that will fuel the rigs. You also can use fuel  
22 gas from time to time, but it has to dry and we really give  
23 treatment to that type of thing.

24           The lower chart, same amount of savings, but it's  
25 per frac pump, so EPS's pressure pumping service. Completions

1 is another way to witness for that. But basically, per pump,  
2 per year we're saving about the same amount of money again,  
3 based on the content of the fuel rig, the type of fuel used.  
4 The factor here, though, is it's usually a 12 pump series.  
5 Okay? You use multiple pumps at once, so your savings are on  
6 the fracking portion of the upper. And so we continue with  
7 that aide until a little bit of --- using that window.

8           So the cost effectiveness it there. The options are  
9 there. I don't talk too much to the pace, but when you're  
10 talking heavy duty, we've got engine options. We've got engine  
11 options that Caterpillar, GE and a few others provide that do  
12 the work in the field, that also do work for mine hauling  
13 trucks and go work in coal mines, also work for locomotives,  
14 work for ships, they have many ships.

15           Moving to emissions reduction, I have a chart there  
16 to the right. And the real point here is to note that your  
17 primary sources from emissions are either power generation or  
18 transportation. So you can --- by working on power gen, by  
19 working on transportation we really see the difference.

20           The next chart shows where in the transportation  
21 sector we have our largest opportunity to reduce. And as could  
22 be expected, we like you to be, of course, the largest  
23 opportunity. Primarily, this is the largest user of fuel by  
24 far. However, there aren't as many options on the vehicle side  
25 for compressed natural gas vehicles. You can convert a lot of

1 vehicles, but from going to your dealership and buying your  
2 vehicle, you're pretty much --- that you or I might use, we're  
3 pretty much down to the Chevy Impala or a pickup truck. So  
4 hopefully when you look at Chrysler, Fiat prepares and markets  
5 about 40 different passenger vehicles in Europe, some of them  
6 in Europe. We really hope that it starts to move in here.  
7 Mercedes, BMW, all of those, Volvo, they're all able in CNG  
8 versions across the world.

9           So when we look at the next percentage, and it's  
10 closer to like the new --- and then you can see emissions  
11 reduction from a dedicated natural gas rig to fuel, and  
12 completion with rigs. And each is significant heavy duty, so a  
13 great target a well. The primary reason we can really reduce  
14 is looking at the chemical formulas for each of the fuels.  
15 Methane is CH<sub>4</sub>, so that's one carbon. The propane is C<sub>3</sub>H<sub>8</sub>,  
16 three carbons. Gasoline generally C<sub>8</sub>H<sub>18</sub>, eight carbons. And  
17 diesel is 16 carbons. So it's pretty simple to understand why  
18 emissions are higher in diesel. The gas limits basically start  
19 there, so you have to take that carbon out somehow. With  
20 natural gas, there's very little carbon that has to come out.

21           So again, there's numbers here. There's a chart  
22 below. We're seeing 20 to 29 percent fewer greenhouse gas  
23 emissions with natural gas vehicles. And it depends partly on  
24 what it's displacing. When you're displacing --- and I have a  
25 program in Colorado where we displace 15-, 20-year-old school

1 busses. Then you start to talk about 50 percent reduction in  
2 greenhouse gasses. So one of the things that I kind of show in  
3 this bottom chart is there are a lot of studies that come out,  
4 there are a lot of different percentages, and you really have  
5 to understand the background and the statistics that are used.  
6 So are you comparing to a brand new piece of vehicle? It  
7 doesn't look so good. I mean, it's still better, but it's not  
8 as much better. Now you're in that lower 20 percent. If you  
9 compared to a 15-, 20-year-old vehicle, then you're definitely  
10 beyond the 30 percent. So we need to look at all the facts.  
11 And again, I'll leave the details there.

12           So from an opportunity perspective, and I've not  
13 touched too much on the fact that this is a domestic fuel that  
14 provides an energy security. I think we understand that. Very  
15 little natural gas is brought into this Country. There's just  
16 a little bit of LNG that comes in to the Northeast for our  
17 power generation. But the opportunity is there to control our  
18 energy to that destiny. We need to use some of the fuels that  
19 we have here, and to minimize the importing of energy from  
20 other countries.

21           If we look at the chart that has the Nation on it,  
22 and this is a number for both Canada and the U.S., if we were  
23 to displace all transportation fuels, we would displace 74 Bcf  
24 a day of fuel, and that's not going to happen in my lifetime or  
25 probably just about anyone's lifetime. But a ten percent goal

1 is something that's reasonable. Hard to put a when on it, but  
2 2025 maybe, something on that order would be a goal that would  
3 be great to have. To take that 74 Bcf a day and turn it into  
4 gallons, at least in the U.S., remains 174 billion gallons of  
5 gasoline and diesel a day, 174 billion. These are facts from  
6 U.S. Government. In Pennsylvania, we use 6.57 billion gallons.  
7 That's a lot of fuel. If we displaced ten percent of that ---  
8 frankly, in Pennsylvania I think we have an opportunity to do  
9 more than that. We are linking their minds with that.

10           A few facts; the gentleman prior to me talked about  
11 some stations, and he has probably more detailed information on  
12 Pennsylvania. But across the Country, we have 1,564 CNG  
13 stations and 111 operating LNG stations. Some of these are  
14 private. But often when they're private you can do a business  
15 to business relationship and be able to use that station as  
16 well. 215 planned CNG stations and 62 planned LNG stations.  
17 We're really building out at about a 10 to 15 a month on the  
18 station side.

19           Pennsylvania --- and these numbers again are from  
20 the Alternative Fuels Database, Department of Energy source,  
21 they lag a little from reality, and often you know more  
22 regionally what's coming. But we have 35 public and 26 private  
23 stations, CNG stations, with 22 planed, and one public LNG with  
24 one planned at this point in time.

25           One of the things that again the gentleman from DEP

1 talked to is programs that Pennsylvania has had in the past.  
2 As of today, a lot of these have sunsetted in 2014. And a  
3 point I'd like to make per a question that was asked earlier;  
4 the chicken and the egg type of question is if I build a  
5 station, where are my vehicles? Do I incent the station, do I  
6 incent the vehicle? What we're finding --- what Noble Energy  
7 did, what we're finding in approximation is new firm vehicles.  
8 Again 50 percent, grant money is the best, incremental cost.  
9 Then there are existing --- there's easily six national firms,  
10 and many more local firms that will go to stations based on  
11 your commitment to the commitment of their stores.

12           And the best program I've seen --- again,  
13 Pennsylvania has done this, is to look at when you give a  
14 station grant or when you give a vehicle grant, make sure  
15 they've committed to a station. Make sure there's a  
16 commitment. It doesn't have to be already passed contracting,  
17 because that's just very hard to get to. But a commitment;  
18 they know where they're going to fuel, and they know that the  
19 accessibility will be there, because that's a station where  
20 they'll look at.

21           So we've talked about the Pennsylvania Programs  
22 already. Act 13 was very important. It did sunset and expire  
23 the end of 2014. There is a bill, House Bill 1517, that is out  
24 there that asks for that to be continued. Maybe that's not the  
25 right form to do it, maybe it's another new bill, maybe it's

1 part of the budget. I don't know. But in your packet, you  
2 also have an NGVAmerica little flyer on requesting that  
3 extension in some way, shape, or form.

4           So moving to the --- nearing the end of my talk, I  
5 did want to show just maybe in a different way, a different  
6 chart, the opportunity that we see in oil and gas, not only for  
7 our rigs and our completion equipment, with all of the trucks  
8 that we use that go back and forth that are noisy. There are  
9 many of them that they're noisy because of diesel, what it's  
10 possible to do. And I'm not going to read this chart, but take  
11 a look at a Drilling Rig Site Preparation. There are 90 to 175  
12 truckloads of goods, fuel, you know, whatever they come in for  
13 that. Let's go to drilling, 43 to 47 truckloads. Completion,  
14 800 to 1,165 truckloads. And then 30 to 50 at the production  
15 site.

16           If we can convert or have our suppliers convert  
17 their Class A, class separate vehicles that are hauling this  
18 information --- or this material in, we're able to  
19 significantly reduce emissions in the area, reasonably reduce  
20 some noise. And this is in addition --- and these numbers are  
21 a couple of years old. They're probably a little less today  
22 because of the pipelines we put in to haul our water to and  
23 from and various ways that we try to get goods in without lots  
24 of trucks.

25           But this is significant. And one of the things that

1 I do for Noble is I meet with our suppliers and put on  
2 seminars, that type of thing, to help them understand the  
3 opportunity. They will save money from within probably a year  
4 of the increment --- taking care of the incremental cost of the  
5 truck. And I work with them to do that. It's hard to work  
6 with them without having to do the incentive program. Very  
7 difficult. Colorado, we're having more availability to do that  
8 with some of the programs here.

9           So specific to Noble, Pennsylvania, we do convert  
10 our fleets. Our pickup fleet, we use bi-fuel for the every  
11 reason that we need to have gasoline if we run out of CNG. So  
12 it has a 20 gallon CNG tank, a 20 gallon gasoline tank. And it  
13 starts on CNG, it uses CNG until it's gone, and then flips over  
14 to gasoline. The other part of my job with Noble is to help  
15 work with station builders in key areas where we operate.  
16 Canonsburg, Sunoco is working on one right now. They will open  
17 in December, we're thrilled. Hopefully there will be another  
18 station right at the Southpointe area by next spring or early  
19 summer. So working with several members on that and also out  
20 in the field places. We have 10 right now, we have 20 more to  
21 be converted. This is on 100 trucks in the area.

22           Operations usage; in the past, we have been using  
23 LNG operations. Currently we're ramped back a little bit, but  
24 when we ramp back up, we will be using the LNG in our  
25 operations. We do use --- we do the new investment, and

1 Pennsylvania helped fund --- actually did fund an ARC vehicle,  
2 so that we could build it again for the ARC. And this is just  
3 recently that we did that, and thank you for being there and  
4 supporting that. It's really been a great thing to see.

5 Colorado real quickly, we have 110 trucks converted.  
6 We as a company will buy --- when we buy pickups, they will be  
7 biofuel CNG pickups going forward. So we're converting  
8 everything we can, but we prefer to buy new from the dealer,  
9 local dealers and helping the economy that way.

10 In Colorado, two rigs and two completion equipment  
11 sites using LNG. And in Colorado, we've been able to put a  
12 School Bus Program in place. And this is something we're able  
13 to do because the state has a program that will pay up to 80  
14 percent of the incremental cost on the school bus, and it's  
15 actually on many vehicles. In the first school bus, we did  
16 \$60,000. This is the 80 passenger busses. If it's a 30  
17 passenger bus, we give them \$40,000. But that means that they  
18 can buy two CNG busses for the cost of one diesel bus. And  
19 these are school districts that --- some of them have never  
20 bought a new school bus before. They've always bought used  
21 busses. I was at a dedication just last Tuesday. Seven busses  
22 in the Greenleaf School District. We've done 29 busses to  
23 date. And then we're just getting into Texas. I think we're  
24 probably an early acquired company in Texas. So we're going to  
25 start with them.

1           In conclusion, Pennsylvania is fortunate to have a  
2 vast natural gas resource in its state that through the natural  
3 gas industry provides jobs in the industry and in the ancillary  
4 support of the needs of the industry and its people, funds to  
5 landowners and governments, broad economic benefits to  
6 communities, and the investment of the industry's employees in  
7 the state and their communities. The expanded use of this  
8 product will further aid the state. And as in the case of CNG  
9 and LNG, it will provide reduced fueling costs, cleaner air,  
10 domestic fuel, and comes with an abundance that extends more  
11 than 100 years. Pennsylvania has already shown that it  
12 understands the important role incentives play in building new  
13 markets, and it is time to continue that commitment to aid the  
14 use of natural gas as a transportation fuel. NGVAmerica and  
15 Noble Energy thank you for your support and the time to talk  
16 today.

17           CHAIRMAN HUTCHINSON: Thank you very much, Ms.  
18 Merrow. It was great and full of detail, and we thank you for  
19 sharing that with us today. Any questions from the panel?  
20 Representative Saccone?

21           REPRESENTATIVE SACCONI: Yes, very good testimony.  
22 I love your charts. I'm a big chart person, I'm a visual  
23 person. As item 13, your supply estimate, is that job related  
24 in current demand? Is that how you figure that out to go in a  
25 15 year supply ahead?

1           MS. MERROW: Actually, that looks at reserves.

2           REPRESENTATIVE SACCONI: That looks at reserves?

3           MS. MERROW: Looking at the reserves and extending  
4 out into the almost proven reserves of things. The Potential  
5 Gas Committee does this every year.

6           REPRESENTATIVE SACCONI: Okay. Thank you.

7           CHAIRMAN HUTCHINSON: Senator Bartolotta?

8           SENATOR BARTOLOTTA: Just along the lines of my same  
9 question is that, but I also have a comment. I want to thank  
10 you, again. Noble Energy is really, really a very generous  
11 community partner, and was there with dedication for the  
12 Heartland for Human Services. It's an ADA compliant van that  
13 Noble Energy donated to that state. And not only was it a  
14 wonderful thing to have supplied them with a vehicle, but now  
15 they will be saving up to what percentage on their fuel? Was  
16 it 10 percent or 20 percent?

17           MS. MERROW: No, it was probably 20 percent.

18           SENATOR BARTOLOTTA: Twenty (20) percent. They'll  
19 be saving 20 percent on costs of fuel for that. And along  
20 those lines, if the companies were to convert their vehicles  
21 providing services and supporting equipment and drilling site,  
22 for example. I have one municipality down in Greene County  
23 that they've noticed 100 trucks an hour sometimes going  
24 through. When you count filling in fuel, that's a cost to the  
25 company, it saves the environment, cut out the emissions. But

1 also, can you tell me what the difference is, if any, between  
2 the weight of the gallon of diesel fuel and CNG?

3 MS. MERROW: It's probably easier to couch that in a  
4 context that it weighs more. The tanks, themselves, weigh  
5 more. LNG is not --- it's heavier, but not a lot heavier.  
6 What we've done in many states is ask for a 2,000 pound weight  
7 limit extension. And 2,000 pounds will cover both CNG and LNG.  
8 CNG can be used in heavy duty trucks. A lot of us thought  
9 three years ago that that wasn't capable, that it had to be  
10 LNG. So we're seeing now more and more CNG Class A's. It's  
11 regional, usually. It's not long haul trucking. But the CNG  
12 tanks actually are heavier. So the 2,000 --- I think an LNG  
13 truck could get away with maybe 1,200, but 2,000 covers all  
14 that.

15 SENATOR BARTOLOTTA: Okay. I also had a question,  
16 what is the change in the proposed weight from a school bus to  
17 that --- that uses electric or something like that?

18 MS. MERROW: School busses use CNG. Most of the  
19 vehicles are using CNG unless they are long haul.

20 SENATOR BARTOLOTTA: But does that conversion change  
21 if the consideration for passenger load?

22 MS. MERROW: The tanks in school busses are  
23 typically underneath the bus or they could be above the bus.  
24 They're not in either of your sides.

25 SENATOR BARTOLOTTA: What about the width?

1           MS. MERROW: Well, it really isn't very noticeable.

2           SENATOR BARTOLOTTA: Thank you so much for being  
3 here.

4           CHAIRMAN HUTCHINSON: Representative Ortitay?

5           REPRESENTATIVE ORTITAY: Thank you. You mentioned  
6 earlier about some of the other car companies, car  
7 manufacturers making CNG vehicles. What are other states and  
8 other countries doing to encourage the purchase and the use of  
9 these cars?

10           MS. MERROW: Europe is totally driving the use of  
11 natural gas by taxing diesel and gasoline for the consumer. So  
12 I don't know how well that would go over here, but that's  
13 largely what it is. And just the gasoline and diesel cost is  
14 much more over there as well. They're importing everything,  
15 but the taxes are the primary difference. Now, the number one  
16 user of natural gas vehicle per capita is Pakistan. Iran is  
17 another one. Iran says you will have a natural gas vehicle  
18 because I'm shipping my oil. So it's different governmental,  
19 regulatory things surrounding it.

20           REPRESENTATIVE ORTITAY: But what's different in  
21 Denver? Because I know you brought Denver up. What's  
22 different in Denver than here in Pennsylvania as far as the  
23 incentives they offer, the things that they are doing?

24           MS. MERROW: Denver really over the last three years  
25 has put a lot in place. So there are tax credits that cover

1 all sides of the vehicles that go 50 percent of the incremental  
2 cost. And it's a rebate as well, so if you don't owe as much  
3 tax you get it back. Then that also --- that bill, the House  
4 Bill 1326 covered the weight limit. It also covered  
5 calculating the fuel excess tax in diesel gallon equivalent and  
6 gasoline gallon equivalent, which Pennsylvania is pretty much  
7 operating in that part as well.

8           They also then announced the Alt Fuels Colorado  
9 Program last year. It's a four-year program using the  
10 Congestion Mitigation and Air Quality Funds, so Federal funds  
11 that come into the Highway Department. And the Colorado  
12 Department of Transportation allocated \$30 million out of those  
13 funds to use for a grant program. \$15 million goes to  
14 stations, and they pay up to half a million per CNG station.  
15 And \$15 million goes to vehicles, and this is where the School  
16 Bus Program fits in. It's got to be a percent of the increment  
17 cost.

18           Now, if you're a private industry, and you're  
19 getting a tax credit, and you're looking at the grant, they can  
20 equal it out so that you're not double dipping in that. But  
21 the municipalities and local governments have DOLA, which is  
22 the Department of Local Affairs. And they have grants for both  
23 vehicle stations and general community inspectors with the  
24 municipalities. Those are the key things. I kind of covered  
25 all the bases.

1           REPRESENTATIVE ORTITAY: Yeah, you hit all of them.  
2 Thank you.

3           MS. MERROW: We're very happy out there.

4           CHAIRMAN HUTCHINSON: With no further questions, I  
5 just want to thank you for your testimony, and I appreciate you  
6 coming today and the great job you're doing. Next, we will  
7 hear from Mr. George Stark, who is the Director of Cabot Oil &  
8 Gas.

9           MR. STARK: I understand it's hard to hear. In case  
10 anybody needs the testimony to sort of follow along with, here.  
11 I'll do my darndest to be loud. Some of you know me. If you  
12 know me, I can be loud. Needless to say, Mr. Chairman, I  
13 appreciate your taking the Committee out here. Representative  
14 Saccone, likewise. I enjoy coming to your hometown. As a kid  
15 growing up in Venetia, I had an opportunity to come to  
16 Finleyville, lived in Venetia. This was an easy walk to work.  
17 So again, we'll do what we can from the standpoint of the  
18 overview of what we were trying to accomplish here today  
19 talking with vehicles and natural gas usage.

20           As a background, prior --- I worked for five years  
21 for Cabot Oil & Gas Corporation, and we're Pennsylvania's  
22 largest energy natural gas producer. So we're headquartered  
23 here in Pittsburgh. We do all of our drilling in Northeast  
24 Pennsylvania in Susquehanna County. But again, what you're  
25 seeing is a lot of production from the whole Commonwealth.

1 Before Cabot, I was with Columbia Gas of Pennsylvania. I think  
2 it was in 1993 that I was driving my own CNG from Columbia Gas.  
3 So I have a long history of utilization of the technology, and  
4 hopefully we can get into a good Q&A. Because I'll be very  
5 honest with you, Sherrie did a very nice job. And a lot of the  
6 pieces that I'll cover were covered in her presentation. But  
7 again, I'll hopefully give you a little overview.

8           In addition to Columbia Gas and Cabot, I'm also  
9 talking today on behalf of the American Natural Gas Alliance.  
10 So again, from the standpoint of not just companies, because  
11 Noble is a member of the American Natural Gas Alliance, these  
12 are an association that's made up of companies that are  
13 drilling for natural gas, but more importantly also looking for  
14 uses. Electric generation, chemicals, manufacturing; a major  
15 area is natural gas vehicles. So again, we are looking at the  
16 vehicles, we're looking at utilization. So as we go through my  
17 presentation --- and I can see I have it up on the slide, I'll  
18 try to do both here. What I wanted to walk you through is the  
19 idea that the natural gas --- the difference that I see  
20 historically is that natural gas is now in the Northeast.

21           When I was with Columbia, the gas was coming from  
22 the Gulf of Mexico. In the summertime, it was pretty  
23 expensive. In the wintertime, it was very expensive.  
24 Therefore, to convert your vehicle, whether it's a fleet or  
25 your own vehicle, was difficult. There was volatility. As you

1 see now represented by the blue that is the Marcellus, you now  
2 have the supply right underneath either the light bulbs, or the  
3 vehicles, or the population. That's what you're seeing that's  
4 represented here.

5           Again, Sherrie covered this and she covered it well,  
6 but it goes to the point of the growing supply. The question  
7 was asked, how do you know it's 150, 115, maybe it's 200 years?  
8 You're seeing more and more estimates growing the supply,  
9 growing the reserves. A case in point for Cabot's standpoint;  
10 when we first came to the Commonwealth of Pennsylvania drilling  
11 in 2010, we estimated that one of our wells would produce over  
12 its lifetime probably seven Bcf of natural gas. We're now  
13 estimating that those same wells will produce 17 billion cubic  
14 feet of natural gas. Understand, from a producer's standpoint,  
15 a well that produced one billion cubic feet over its lifetime,  
16 35, 45 years --- if it produced one Bcf, that was a home run.  
17 What Pennsylvania is now looking at our wells in excess of 15,  
18 16, 17 Bcf, again, right here. So again, that shows you the  
19 supply is growing.

20           So what do you see happening as a result of the  
21 supply growing? You see the price coming down. And that's  
22 what this chart shows you. I mean again, the benefit is  
23 whether you're utilizing it from a LIHEAP standpoint at home,  
24 or if you're using it from a standpoint of manufacturing,  
25 you're seeing a real reduction. And quite honestly, you're

1 going to see that reduction stay. The volatility has been  
2 ironed out from the natural gas standpoint. You can see what  
3 other fuels are, what they're at right now in a sense as a look  
4 at CNG and you see it staying low long term. Even with the  
5 pipelines that are immediately built to move our natural gas,  
6 you still see a supply that's here.

7           The benefit from Pennsylvania's standpoint is --- I  
8 don't like to say it this way, but the reality is we will  
9 always set the floor. The natural gas is here. So if you are  
10 UPS or FedEx, and you're looking to convert and you have a  
11 fleet here, you can tie into a long-term savings as a result.  
12 You no longer have that volatility of a hurricane coming  
13 through the Gulf of Mexico one day announced, next day price  
14 spikes. That is now being eliminated. So from a standpoint of  
15 a company looking to convert, this is what you're benefiting  
16 from; consistent pricing, no volatility --- low volatility, I  
17 should say.

18           When I have the opportunity to talk about what we're  
19 doing, and again, we see this throughout the Commonwealth. The  
20 case I'll give you right now is in Susquehanna County. And for  
21 those who aren't familiar with Susquehanna County, I grew up  
22 here in Westmoreland. Susquehanna County would be very similar  
23 to Fayette County. Beautiful county, very rural, and again, a  
24 place you would go to hunt and fish. Lovely country, but it  
25 didn't have the jobs, it doesn't have the infrastructure. All

1 of a sudden, Cabot discovers that it's one of the leading  
2 counties for production of natural gas. And putting our money  
3 where our mouth is, we took the opportunity to build our own  
4 CNG station. We had to take that effort because again, you may  
5 not believe this, but there was not a local utility in  
6 Susquehanna County prior to the Marcellus Shale.

7           UGI, Columbia, Equitable, those companies don't  
8 exist in Susquehanna County. They just don't have the  
9 infrastructure there. That's all changing now as a result of  
10 Marcellus Shale gas. But one of the things that we wanted to  
11 do in 2010 was construct our own station to showcase for those  
12 who are familiar with the technology. Now I harken back to my  
13 days at Columbia because every time we would have an employee  
14 retire, he always wanted to take his truck with him. When  
15 those trucks went on surplus or for sale, the person operating  
16 that vehicle wanted it. You ask yourself, why would they want  
17 their vehicle? They understood the low cost of operating that  
18 vehicle.

19           So one of the things that hasn't been discussed yet  
20 is the resale market of natural gas vehicles, an extremely hot  
21 market. It's almost difficult to find a used natural gas  
22 vehicle because again, when they're available, they're sold.  
23 Because again, there's that many people looking for them. I  
24 tell that story because I think with Representative Saccone's  
25 question of what are you doing to try to implement more

1 vehicles for the residential, It really comes down to the more  
2 fleet drivers you implement, the more managers of plants who  
3 watch the dollars that they're saving, wait a minute, if I can  
4 do that at work, why am I not doing that for myself? And those  
5 employees at Columbia that drove those cars, they knew of the  
6 durability, they knew the gas mileage.

7           And again, yes, the technology is something that  
8 we're dealing with to make certain we can handle the hills and  
9 the valleys of Western Pennsylvania. And when the Port  
10 Authority switched over 20 years ago, engines were an issue,  
11 engine constraint. I can tell you today, with Cummins and  
12 Kenworth, they're working those bugs out because Susquehanna  
13 County is quite hilly. It's big, endless mountains for a  
14 reason named that. And again, we're seeing great opportunities  
15 from our trucks and those that are supplying them. So by taken  
16 the opportunity --- I apologize, you may be able to see this on  
17 your slide better. But right above the hill of this station is  
18 a drilling rig. It doesn't get any better than that. You're  
19 drilling for it, you're piping it down, and you're using it in  
20 your vehicles.

21           The difference likewise, you heard a little bit  
22 about this from the representative of Noble, the dry gas.  
23 Eastern Pennsylvania has the dry gas. So we're pretty much  
24 able to drill and produce it, and get it to a station like this  
25 with really no need to clean it up because it's practically 99

1 percent pure methane and can go into a station. Of course,  
2 decompression and used gas odorization knock off some of the  
3 water, but practically, you can run it right from the ground  
4 and I'll show you that we were able to do that. Again,  
5 following along whether it's the folks at Noble or Equitable  
6 --- or I should say EQT, and others like Chesapeake; we're all  
7 putting our money where our mouth is, and we are converting our  
8 own vehicles.

9           Range Resources has done this from a standpoint.  
10 Cabot has 90 vehicles in the field that we're utilizing. They  
11 come back to our station. Now, we have a former --- it's Don  
12 Sherwood that has the Sherwood Dealership in Tunkhannock,  
13 Pennsylvania. He is also looking at utilizing --- selling the  
14 vehicle from his shop, and he services them. Now again, I hit  
15 on the notion that this is important because now the mechanics  
16 are servicing these engines. You don't need the oil changes.  
17 You see a clean engine. All of a sudden I'm working on one  
18 vehicle, I'm working on the next, I want the vehicles with  
19 engines coming in here who's staying --- again, the durability,  
20 the staying power is there. Why would I want this other engine  
21 that is going to take a lot more care and a lot more cost? So  
22 that's what you're seeing. So by having and training not just  
23 locals to drive the vehicles, but actually to oversee and  
24 maintain them, that's another benefit and we're seeing that  
25 done locally. But again, it all starts with getting the

1 vehicles out into the field, getting people and utilizing them.

2           And again, you've heard about the savings. We're  
3 benefited because we're utilizing Cabot natural gas in our  
4 vehicles. So as the owner of that gas, we're still seeing  
5 about that \$2 saving, even in today's market. You heard this  
6 earlier, I won't spend much time on it, but this is the bottom  
7 line. From a standpoint of technology, and equipment, and  
8 companies coming to understand what the chances are, not only  
9 are vehicles being converted, but when you think about a  
10 drilling rig, it's an engine, it's a turbine. You know, that's  
11 what powers that facility. The one you're seeing right there  
12 is powered by natural gas.

13           We're taking it from the field where it is and  
14 running it into our equipment. We're saving tremendously on  
15 the environmental standpoint. We're not having to truck in  
16 diesel in that sense. But again, the bigger value is more  
17 people are getting exposed to the technology. More companies  
18 are coming in to say wait a minute, I need to be doing that.  
19 And again, we work closely with Cleveland Brothers, we work  
20 closely with Kenworth on this equipment to make certain. And  
21 again, it doesn't just end with the drilling for natural gas,  
22 but this picture here represents when you're fracking. And  
23 once again, it's horsepower. That's where your really  
24 harnessing to do the hydraulic fracturing, and as you see here,  
25 actually fracking done on natural gas.

1           So again, we're doing everything we can to avoid the  
2 truck traffic, the tearing up of the roads. But more  
3 importantly, you're cleaning the air in the process, you're  
4 delivering a clean burning natural gas. And I will tell you,  
5 on this site here alone, combined \$6 million was saved. There  
6 are ten wells there. And by drilling them on natural gas and  
7 completing them on natural gas, that's how much money you would  
8 save. So you're looking at \$600,000 per well saved by  
9 utilizing natural gas. And again, yes, I can brag on the  
10 companies for doing that. But more importantly, it puts out  
11 the idea that we're showcasing this technology to more and more  
12 people. We're working with Johnson College to get the  
13 mechanics out. There was a time that somebody in their family,  
14 their dad was a mechanic and the son said, hey, dad, are you  
15 going to start on the catalytic converters? And he said no, I  
16 know what I know and I'm not switching over to the catalytic  
17 converter. That will be your job.

18           We're at that point today. There's enough engines  
19 out there that that 40-year-old saying, do I want to be the one  
20 that works on natural --- or I'm sorry, yeah. Do I want to be  
21 the one who works on natural gas engines, or continue doing  
22 what I already know? The 20-year-old is saying, you know what?  
23 I see the opportunity, whether it's in the vehicles, whether  
24 it's in the equipment. They're the ones stepping up. And  
25 again, they have that opportunity to work at Sherwood Chevrolet

1 being the mechanic who puts the engine back into play to do the  
2 maintenance.

3           Again, we all know the benefits and I do have them  
4 in front of you. Fortunately, we got a truck guy here so he'll  
5 enjoy having that information. But bottom line, it's about  
6 energy security, it's about education, and it's about all the  
7 benefits that come from cleaning the air in the process. So  
8 again, a lot of our effort gets into public awareness. So  
9 truly, I applaud you for having this hearing so we can get  
10 folks to understand how the air is getting cleaned as a result  
11 of natural gas. Again, I hit on a lot of the benefits already.  
12 It's the idea that the vehicles are better vehicles. When you  
13 get down to it, the engines are lasting longer, the lifetime  
14 for an oil change is 15,000 miles. You know, you're not doing  
15 what you're doing today with your combustible engines. You're  
16 seeing that engine just burns that much cleaner longer.

17           If you've gone to Penn State, you've seen their  
18 system. A CATA bus system in State College. They were  
19 dedicated probably in 1995 --- I'm going to go by memory here,  
20 so don't hold me to that. But that's when they converted their  
21 fleet over to natural gas. Today, the entire fleet is burning  
22 natural gas from a bus standpoint. So again, it's that  
23 education, that information, getting it out. And we would do  
24 it before, and you would run a kerchief hanky through the  
25 engine and show just how clean it was and it always impressed

1 people that my goodness. And yes, you have to --- there is  
2 that mechanic who's more familiar with the oil based engine,  
3 and the gasoline and the diesel. And you've got to get them  
4 over. Some don't want to, but the new step --- those stepping  
5 forward are seeing the benefit of utilizing that. And again,  
6 the resale value is tremendous.

7           These are --- again, some of the companies that have  
8 converted over, Waste Management is probably one of the best  
9 ones. All their trash trucks are now powered by natural gas.  
10 They're not buying diesel engines for their existing fleet  
11 moving forward. Again, locally, you've already heard mention  
12 from the Department, Giant Eagle and what they're doing with  
13 their facilities. So again, this is what we're seeing. I will  
14 say, the challenge for some of the bus systems, themselves ---  
15 we got quite excited in Susquehanna County to convert. The  
16 schools were being converted there.

17           Montrose High School is converted over. Elk Lake  
18 High School is being converted over from propane and home  
19 heating oil to natural gas. Their saving is in the sense of  
20 just heating their building there. And Elk Lake is saving  
21 \$125,000 a year. They have a gas station on their facility  
22 that powers their busses. Their busses are independently  
23 owned. So you now have to convince an independent carrier to  
24 put the dollars in. That is more difficult. Some of those  
25 systems we're familiar with in Southeast Pennsylvania, Marion

1 School District comes to mind, those busses are owned by the  
2 school district and they have the capital to convert those  
3 busses over. And I think it's Marion that was one of the first  
4 school districts in Pennsylvania to convert theirs over.

5           Those are the kind of things to be thinking about  
6 when you're looking to convert the school busses. I believe  
7 it's a school district in Luzerne County --- and I'm going to  
8 get the name wrong, but they're running all on propane today.  
9 And they have a natural gas pipeline come right past the  
10 school. This would be the school district that services  
11 Dallas, Pennsylvania. And there is an opportunity when those  
12 busses that are owned by the school district convert to  
13 propane, that they would go to natural gas. So that's what  
14 you're seeing moving forward.

15           That ends my presentation. Needless to say, I would  
16 gladly take any questions, any conversation you want to have.  
17 I also have some information from ANGA, it talks about what  
18 some of the states are doing. And I'll make certain you have  
19 that so you know what is some of the action states are taking,  
20 whether it's discounting the taxes or the vehicles aids into  
21 that area.

22           CHAIRMAN HUTCHINSON: Thank you, George. Just I  
23 wanted to throw in that there's some pretty enterprising folks  
24 out there, too. I am aware of it. I've from the convention  
25 --- the Dallas area. A couple of farmers I know, and when

1 vehicles became available, they had all the wells on their  
2 farms and they figured out a way to directly take from that to  
3 fuel their vehicles. And they're just loving it because it's  
4 so cheap now.

5 MR. STARK: Yes. And some of those farmers would  
6 have a farm tapped. They're actually getting free gas because  
7 the pipelines on their property, and yes, to run their  
8 equipment on natural gas is a huge benefit.

9 CHAIRMAN HUTCHINSON: Okay. Any questions from the  
10 panel? Representative Saccone?

11 REPRESENTATIVE SACCONI: Yes.

12 CHAIRMAN HUTCHINSON: Oh, now your mic is not  
13 working.

14 REPRESENTATIVE SACCONI: Thanks again for your  
15 testimony. So glad to see you. And I don't know how --- how  
16 does Pennsylvania compare to other states as far as the  
17 regulations and the laws that we have? What could we do  
18 better? Are we doing pretty good? Or, you know, what do you  
19 see in other exceptions?

20 MR. STARK: There is no doubt that Pennsylvania is  
21 head of the charge when it comes to the Alternative Fuels  
22 Incentive Grant. That is something that has been online for  
23 almost 20 years now. That is something that leads the Nation.  
24 You heard about the notion of converting vehicles over and that  
25 chicken or the egg. Is it the vehicles or is the stations?

1 But putting those dollars aside for both is really what needs  
2 to happen. We need to do that. Again, I think the leadership  
3 that you can show and with the new administration, it's the  
4 idea of calling on Detroit. Fifteen (15) governors three years  
5 ago put together a letter saying to Detroit, if you build the  
6 vehicles, we will buy them. Think about how many vehicles the  
7 Department of General Services utilizes, themselves. Whether  
8 they're simple vehicles, and I say simple in the sense that  
9 they just operate a prison and they're right there, or they're  
10 long over the road, those are areas where your leadership is  
11 needed to say we'll actually purchase those vehicles.

12           There's a lot of regulations, there's a lot of  
13 opportunities. I will leave you with information on how best  
14 to incentivize. And the incentive is really on the idea of  
15 what's that initial cost, especially on a residential person?  
16 If you're looking at the one offs, the fleets normally will  
17 have a savings built in. That's what we're seeing. We're  
18 seeing again, from the cost of the fuel, from the maintenance  
19 of the vehicles, we only have to put 24,000 miles on a vehicle  
20 for us to see the savings. Our savings is back at about 18  
21 months. But we're using our vehicles everyday. The bus system  
22 in State College ran everyday. It came home through a station,  
23 and filled up overnight, and went back out. UPS, FedEx, same  
24 idea. They've got a place to come back to. That's the kind of  
25 thing we need to look at in how you incentivize that fleet, but

1 then give public access to it. There are --- you heard about  
2 20 stations so many years ago, now at 100.

3 We're seeing in the Scranton market new vehicles,  
4 new stations being put on. Mohegan Sun, the casino; they want  
5 one on their property. It's close to the airport. And  
6 Pittston, is my understanding, would also be utilizing. That  
7 createdness of it's close to the airport, it could have  
8 multiple uses, it'll service all the vehicles at Mohegan Sun  
9 and then the Township has access to it.

10 REPRESENTATIVE SACCONI: Great. Thank you.

11 CHAIRMAN HUTCHINSON: Senator Bartolotta?

12 SENATOR BARTOLOTTA: Thank you so much for your  
13 testimony. It's great to hear that Cabot is doing all that  
14 it's doing. A couple questions. So no oil changes for 15,000  
15 miles in a CNG vehicle?

16 MR. STARK: That's what we're looking at.

17 SENATOR BARTOLOTTA: All right. No, I've had to do  
18 the oil for 27 years this month. So yeah, I've noticed that  
19 even in regular vehicles they're going from your typical 3,000  
20 miles to five. You know, it's ---

21 MR. STARK: I did grant you what I said.

22 SENATOR BARTOLOTTA: Yeah, I saw that this is a  
23 thing. But my question is why? Is it because the CNG's run so  
24 much cooler? Is it because of a lack of emission parts?

25 MR. STARK: It really goes back to the engine

1 itself. You're not having that need for the combustion and the  
2 utilization of the oil there. The clean burning natural gas,  
3 the way it goes --- the way it enters into the engine tank and  
4 then it just burns steady from there; that piece is what's  
5 really missing while it's keeping the engine cleaner.

6 SENATOR BARTOLOTTA: Because you said it was burning  
7 4 versus burning 16.

8 MR. STARK: Correct.

9 SENATOR BARTOLOTTA: And that lower burning, and I  
10 was just curious why the difference. Another question; you  
11 said that Johnson College ---

12 MR. STARK: Yes.

13 SENATOR BARTOLOTTA: --- has a training program for  
14 mechanics to work on CNG's. How massive is it? You know, are  
15 there courses? You know, something that's just an additional  
16 --- someone who is taking mechanic courses, say vo-tech or  
17 something, they could just go and take a supplemental kind of  
18 course and add on to it?

19 MR. STARK: You definitely can add onto it, or you  
20 can specialize in it. It really comes down to the student  
21 themselves. It's not that much different from a learning  
22 standpoint. It's just a question of how specialized does your  
23 skill set want to be? Do you want to work for Cleveland  
24 Brothers doing nothing but natural gas engines in over the road  
25 vehicles or in turbines that are sitting burning from a

1 drilling rig standpoint?

2           So again, the bigger the engine, the more that goes  
3 into it, you may want to specialize, and that's why Johnson  
4 College is looking at making certain that they have that  
5 technology available and get good students. Some, it might  
6 just be at Sherwood Dodge where you're going to have a diesel  
7 come in, a natural gas come in, and a gasoline. Then your  
8 knowledge base doesn't have to be as extensive.

9           SENATOR BARTOLOTTA: But does Johnson College have  
10 like a certification program where it's a standardized  
11 curriculum that can be shared with other colleges? I mean, how  
12 do other ---

13           MR. STARK: Yep.

14           SENATOR BARTOLOTTA: --- training facilities acquire  
15 this program to provide more certified CNG mechanics?

16           MR. STARK: Fortunately, there is a certification  
17 program, so it is out there. And Johnson College is looking at  
18 getting their staff, faculty and facilities certified to ensure  
19 that they have that certification.

20           SENATOR BARTOLOTTA: Like a program of some sort?

21           MR. STARK: Correct, correct. They want that extra  
22 certification for the student coming out having that additional  
23 piece. There is a dollar cost that goes with it. I can't  
24 recall what the certification costs, but I know that piece is  
25 out there.

1           SENATOR BARTOLOTTA: I'm sure that the equipment  
2 that they use to train on is something different.

3           MR. STARK: It is different, correct. And that ---.

4           SENATOR BARTOLOTTA: I'm just wondering if there's  
5 any sort of grant programs at some other ---.

6           MR. STARK: I think at this point there isn't, truth  
7 be told. I don't believe of a grant program helping academic  
8 institution train. I think there are the option that you can  
9 toggle some dollars together. Because what we know, what we  
10 see happening is Kenworth has an office at Wilkes-Barre. They  
11 are burning the --- they are using the vehicles. They want  
12 people to come over. So they're willing to donate equipment  
13 that the students would work on. Again ---

14           SENATOR BARTOLOTTA: We've got grant programs in  
15 place now that are used for places that offer additional  
16 training programs. For example, Penn Commercial a couple years  
17 ago, I guess that they added on a welding program. They  
18 dedicated grant funds for that. But that would be really very  
19 interesting to find out how many training facilities are  
20 available that are going in that direction.

21           MR. STARK: Sure.

22           SENATOR BARTOLOTTA: Particularly what are the  
23 options in that way of training.

24           CHAIRMAN HUTCHINSON: Representative Harkins.

25           REPRESENTATIVE HARKINS: Thank you. Very

1 interesting testimony. I'm just curious, what's the longevity  
2 of doing this? How much time can we get out of a natural gas  
3 engine?

4 MR. STARK: Yeah, and to give you an actual number,  
5 I don't know. But what my information is, back to the retirees  
6 who had their vehicles and ran it all day at work, and would  
7 retire it and take it home, that durability is there. You're  
8 looking at --- and that's why the used market is so hot in the  
9 sense that you can't find it --- because the engine burns  
10 cleaner and stronger and longer, therefore, it burns just that  
11 it can exist longer. I can't answer your question directly,  
12 but the engine life would be 50 years versus 30 versus 20. They  
13 don't have that.

14 REPRESENTATIVE HARKINS: Isn't it like 100,000 miles  
15 or ---?

16 MR. STARK: Correct. It would be much longer than  
17 100,000 miles, but again, I'd look maybe to somebody else if  
18 they have that information.

19 REPRESENTATIVE HARKINS: And then just curious, if  
20 someone that has had your experience with the vehicles that you  
21 said through years, ---

22 MR. STARK: Yes.

23 REPRESENTATIVE HARKINS: --- what are some of the  
24 kinks that you experienced years ago that have been reflected  
25 back?

1           MR. STARK: The biggest kink that I experienced was  
2 truly acceleration. I mean, that would be the one. When you  
3 were going on a hill, if you were on natural gas, you would see  
4 a little tendency to go a little slower. Today, whether it's  
5 Ford 150 or Chevy Silverado, we're not seeing that at all.  
6 That kink has been worked out, especially on the these.

7           SENATOR BARTOLOTTA: Even with the larger hauling  
8 trucks?

9           MR. STARK: Even with the larger hauling, yes.

10          SENATOR BARTOLOTTA: Is it like a Briggs and  
11 Stratton? Cummins was the one who created one of the  
12 regiments, so really that included for like ways behind  
13 you ---.

14          MR. STARK: Correct.

15          SENATOR BARTOLOTTA: And with the big ones that  
16 dump, I'm just curious.

17          REPRESENTATIVE HARKINS: How about weather issues,  
18 cold?

19          MR. STARK: See the pros of this is are from that  
20 standpoint, you don't really see anything. Even from a cold or  
21 hot standpoint, you didn't see any real change. The other kink  
22 that I've seen that has actually worked out well is the space.  
23 The vehicle I had, the entire trunk was the tank because there  
24 was dual fuel. So I had a gasoline tank, and the entire trunk  
25 was the CNG tank.

1           They have gotten much better at developing the  
2 tanks, themselves. They're smaller because of the way in which  
3 they're being able to be reinforced, and then also to stay more  
4 creative with where they put them. And with a lot of our  
5 trucks, it's right behind the driver. Where the toolbox goes,  
6 they actually made the toolbox fit in over top of the area. So  
7 again, you're not losing that space. Fifteen (15), 20 years  
8 ago, you actually --- you had to surrender space for the tank.  
9 And fortunately, today you're seeing that not be the case.

10           REPRESENTATIVE HARKINS: And back then everybody was  
11 worried about explosions and how they melt stuff.

12           MR. STARK: And back then, we would show the video  
13 of the tank being hit with a 45 caliber, you know, and nothing.  
14 And that's it. That is the best thing. Again, when you think  
15 about it, we have just been trained over time to drive around  
16 with a 25 gallon of sloshing gasoline or diesel, and think  
17 absolutely nothing of it. Nothing. And that ---

18           SENATOR BARTOLOTTA: Might have to think twice.

19           MR. STARK: When that gasoline creates a leak, it  
20 pools under your vehicle. You think nothing of it. The idea  
21 of natural gas is always but if there's a leak, what's going to  
22 happen? It's going to dissipate right into the environment.  
23 There's no pooling. So the idea of safety, I would tell you  
24 that a natural gas vehicle is ten times safer than a gasoline  
25 vehicle. Something knows --- it's getting over that hurdle to

1 show people. It always is a question of how safe are they?  
2 But if you look at those tanks and you understand the fuel ---  
3 you know, again, an area can be quickly --- actually, if the  
4 gas is too rich, it will actually take the oxygen and a spark  
5 will not be able to ignite it.

6 REPRESENTATIVE HARKINS: Thank you.

7 MR. STARK: Pleasure.

8 CHAIRMAN HUTCHINSON: Thank you, Mr. Stark, ---

9 MR. STARK: You got it.

10 CHAIRMAN HUTCHINSON: --- for testimony.

11 MR. STARK: Thank you, guys.

12 CHAIRMAN HUTCHINSON: Our next testifier is --- and  
13 this a team effort. Dr. Lutitia Clipper, CEO of Clipper  
14 Enterprises, LLC, as well as Susan Oliver-Stough, Community and  
15 Government Relations Manager for WPX Energy. Thank you so much  
16 for coming. Once you get situated, you're welcome to start  
17 whenever, and whoever is going first.

18 MS. CLIPPER: I'll just trust that it's on. Can  
19 everyone hear me? Okay. This morning, we heard quite a bit  
20 about natural gas. So I'm going to go through these first two  
21 slides here rather quickly because I think you've gotten the  
22 idea about the wonder and the availability, the advantages.  
23 And certainly, it's those things about natural gas that make it  
24 an advantageous thing here in our community to use for  
25 transportation. And to address specifically the things that

1 this committee has asked us to discuss today; natural gas being  
2 clean, safe, powerful, yet quiet makes it a very approachable,  
3 a very accessible fuel for transportation, and desirable for  
4 use in our region.

5           One of the things that we heard quite a bit today  
6 already about as far as emissions are concerned regarding the  
7 chemical composition of natural gas, be that methane is the  
8 simplest of those hydrocarbons. We recognize that because of  
9 it, the emissions from the vehicles that would be running on  
10 natural gas --- of course, you could be able to stand behind  
11 any of those vehicles and take a nice breath, and not have a  
12 problem with being able to breathe freely because you're going  
13 to give off the same thing with natural gas as it burns as we  
14 as humans do, carbon dioxide and water.

15           The other thing about natural gas being so safe, as  
16 we just heard from our last speaker, is that because of its  
17 composition also, it will not pool. It is not going to fall  
18 and lay on the ground. It will dissipate, so it eliminates  
19 that spill hazard that we have seen so much about. When we  
20 think about even some of the commercial movies that have been  
21 out recently, and all of the things that have been happening  
22 even with the locomotives, we have a lot of concern about  
23 spillage. So with natural gas, that is not the concern because  
24 of the dissipation. It's safe handling as well. Natural gas,  
25 for our area especially, we have been quite familiar with

1 natural gas in our region for a number of years.

2           So this is not a new fuel for us, this is a proven  
3 fuel, proven technology, highly engineered tanks as we heard  
4 from Mr. Stark talking about --- I was part of that severe  
5 abuse test video series that went out. So it was my delight to  
6 hear him refer to that. So when you have armor piercing  
7 projectiles hitting an onboard fuel storage tank and you don't  
8 have anything happen, and you drop it from 16 or 20 stories and  
9 you can still use that tank, I'd say we are in much better  
10 condition than if I go stick a fork through my tank outside in  
11 my vehicle that's running from gasoline. So this is a  
12 situation that we want to be able to recognize and continue to  
13 talk about.

14           And as we talk about power, I know I did hear  
15 Senator Bartolotta ask questions about the power with the  
16 vehicles that are in the area. Frequently, I refer to myself  
17 as an old gas gall. You know, I've been in the business for a  
18 long time; over 25 years I like to say in my bio because it  
19 scares a lot of the younger people I work with when I tell them  
20 that I've really been working almost 40 years in the gas  
21 industry. So I just wanted to make it a little easier for  
22 everybody to digest. But basically, we have seen the  
23 improvement in technology with the natural gas engines over the  
24 years that we're not having as much of a problem. And while we  
25 were sitting there and I was listening to your comments, I just

1 did a quick text to a friend of mine, who is working with the  
2 Giant Eagle heavy duty refrigeration trucks. And I said hey,  
3 Mike, what's up with this Briggs and Stratton in this  
4 situation? And so we're going to get some more information on  
5 that and find out a little bit more detail on that for you.

6 But I can assure you that with the common type ISX  
7 engine, and they're looking at an additional engine technology,  
8 those truck are not having a problem with Pennsylvania pulling  
9 those hills. And so we are now in an area where we can deal  
10 with the 130 octane, we can deal with the equivalent torque and  
11 horsepower from our diesel counterparts, we can deal with clean  
12 emissions. We can deal with it, we can deal. So I think the  
13 situation that we want to say is why aren't we using more  
14 natural gas in our area? We are in the gas rich area, the  
15 heart of natural gas in the United States. We are global  
16 positioning for energy in our Nation, in the world. We need to  
17 get out of the doldrums and figure out a way that we can come  
18 to some kind of understanding. Work together and use this fuel  
19 so that we can be able to help ourselves out of this hole that  
20 we're in with the economy. So if we can work to do this, we  
21 can certainly position ourselves better than Pakistan and Iran.  
22 My goodness.

23 Okay. So when we look at a CIA work fact book here,  
24 and I've pulled this from one of the Clean City slides, there  
25 are over 120,000 NGV's in the United States, over 15.2 million

1 worldwide, but we're still importing around half the oil we  
2 use. What's wrong with us? Okay. So energy independence,  
3 that should be something we want to do. Definitely we can get  
4 out of this small percentage of using natural gas. Even if we  
5 moved it up to about 20 percent, we could really make a  
6 difference for ourselves economically, environmentally, and be  
7 able to help the businesses in this area to be able to function  
8 more effectively.

9           What uses natural gas for transportation? We've  
10 recognized it's non-traditional. We use it for our showers,  
11 with our water heaters, our cooking our food, when heating our  
12 homes. But we can use it for all of those applications you see  
13 there. One of the things that Susan and I are going to focus  
14 on in the remainder of our presentation will be that last left  
15 corner part of the slide there. But yes, in the transit and  
16 the trash hauling, and in all of the kinds of shuttle vehicles,  
17 as well as locomotives; natural gas has a place, LNG and CNG.  
18 And so we want to be able to use it more.

19           I retired recently from People's Gas. The vehicle  
20 that's up in the front there on the left side was Vogel  
21 Disposal, that's one of the fleets. I work with a fleet  
22 operator who is dealing with Punxsutawney School District. One  
23 of the former other customers were transit, Indiana County  
24 Transit Authority. I worked with and introduced the first  
25 natural gas transit bus in Pennsylvania working with Altoona

1 Metro Transit Authority. Introduced Phil Fry to Hugh Mose to  
2 work with CATA Transit. That is why CATA Transit is working  
3 through and getting all of those vehicles that are still  
4 running on natural gas. So we have a history of using natural  
5 gas, having it available now. So what we want to do is see how  
6 we can use it, the technology, and have an economic benefit.  
7 What do we want to do? We want to have a clean fuel  
8 opportunity to make a difference for clean rivers. What  
9 difference does this make to the operator? The operators want  
10 some fuel security. They don't want volatility. They want to  
11 be able to have something that's low maintenance, they want to  
12 be able to operate with future regulations, and be able to have  
13 an ability to know that they're not going to be slapped with a  
14 lot of EPA regulations without a viable way to fix it.

15           So what we're trying to do is work with them with a  
16 project that we will tell you a little bit more about that is  
17 working toward that. But what does that mean to us as gas  
18 suppliers, distribution companies, pipeline companies? It is  
19 the potential high horsepower user of this wonderful supply of  
20 natural gas we have in our region. It's going to provide a  
21 year round use of it because when you have a togo vessel, it's  
22 delivering your product to Lowe's, to Ikea, to everything  
23 that's going to be in need to have product for. We don't think  
24 about where we get these products. We go to the store and pick  
25 them off the shelf, but somebody has to get them there.

1           Okay. So when we talk about this, why is this  
2 important? Because we have to comply to these EPA emissions.  
3 There are guidelines for the different tier levels of emission  
4 requirements that are coming within 200 miles within a location  
5 whether there are individuals. So now we are dealing with  
6 trying to make this profitable and workable for individuals to  
7 be able to operate this. And what's happening in our region?  
8 Our region has a vintage fleet. Fleet vehicles that would be  
9 1930s, 1950s. And you think, wow, why would I do that? Why  
10 would anyone do that? But our operators in our area, they  
11 repower those vessels. And because they are in the inland  
12 waterways, they're not dealing with the corrosive nature of the  
13 blue water from the salt. So they can repower and reuse those  
14 vessels. But they do have a situation where they don't want to  
15 be the ones that perhaps are leading this technology. They  
16 want to figure out, is it working? So I don't want to mess up  
17 my operation and have to worry about is this going to hamper my  
18 opportunity to continue my daily getting my product to Lowe's,  
19 or impacting what my business can actually do.

20           So these are some of the ways that we're working to  
21 alleviate the barriers and make bridges so that this  
22 technology, working with our natural gas to be able to assume  
23 not only a clean, environmentally friendly fuel, but a best  
24 practice for what we see happening and making available. This  
25 is a quote from a CEO at General Motors. He asked us to take a

1 look, think back 20, 30 years ago, diesel wasn't around a lot.  
2 But if we got about 40 percent of those stations today  
3 nationally that have diesel, what if we had 40 percent of our  
4 stations today that actually had CNG? Where would we be? We  
5 wouldn't be where we are now with foreign currency deficits or  
6 trade deficits. We would have a better environment. So we  
7 need to think about what we're doing. Natural gas makes a  
8 difference for our economy, energy independence, improving our  
9 business and offering us a clean alternative to what we want to  
10 do. This is to give you a motivation while Susan is speaking.

11 MS. OLIVER-STOUGH: I'm the Manager for Community  
12 and Government Affairs for WPX Energy. But I'm also here on  
13 behalf of the Associated Petroleum Industries of Pennsylvania,  
14 the American Petroleum Institute. We're a member of that. I'm  
15 also the past chair of the Gas Use Committee for the Marcellus  
16 Shale Coalition. But in particular today, I'm part of a  
17 consortium that has come together under the Pittsburgh Region  
18 of Clean Cities to take a look at emissions within the marine  
19 community. And in particular, the retrofit and the conversion  
20 of a towboat to burn liquified natural gas, or LNG.

21 If you watch the news or you follow any social  
22 chatter, you know there's a lot of comments going on about  
23 climate change, especially in relation to the Pope's visit last  
24 week. You know, that kind of had a spike. But besides the  
25 chatter that is going on, the facts are clear. As stated by

1 the API President and CEO, Jack Gerard, by embracing our  
2 Nation's energy renaissance, we can have clean air, we can have  
3 lowers costs, and we can create more jobs in the United States  
4 while also providing an example to the world. As Dr. Clipper  
5 pointed out and others have this morning, the United States is  
6 not taking full advantage of the opportunities we have with  
7 natural gas.

8           We have a handout that is on the table. The date  
9 line says 2013, but it actually should say 2015. There is a  
10 new study that came out from T2 and Associates. And they took  
11 a look at what is the driving force behind major greenhouse gas  
12 reduction in the United States? The study tallies federal and  
13 private investments in zero and low emissions technologies  
14 between 2000 and 2014. It shows that the oil and gas sector  
15 invested approximately \$90 billion in emissions technologies  
16 compared to the automotive sector, which used \$38.2 billion,  
17 the electricity utilities at \$37.1 billion, and the agriculture  
18 and food processors at \$13 billion. Over the same period, the  
19 federal government invested \$110.3 billion for a total U.S.  
20 investment of \$303.1 billion.

21           The oil and natural gas sector investments include  
22 technologies to capture emissions, improve efficiency, reuse  
23 excess heat and sequester carbon dioxide. And it is America's  
24 oil and natural gas industry that actually is leading all  
25 industries in technology that lowers emission. Now, if you

1 take a look at what we're doing, that's what we're doing in the  
2 oil and gas industry for our operations. As Noble Energy and  
3 Cabot explained, this is something that's happening within the  
4 industry. But imagine what could happen in Pennsylvania and  
5 across the Nation if other industries and government agencies  
6 followed our emissions reduction example.

7           So why is this even important to Pennsylvania?  
8 Well, according to Clean Marine Energy, nearly 90 percent of  
9 all goods traded globally spend time in transit by ship. In  
10 order to meet our needs, 100,000 ships are operating around the  
11 globe 24/7, 365 days a year. These ships use primarily heavy  
12 oil and sulfur dioxide, nitrogen oxide, and have particulate  
13 matter emissions. The total CO2 emissions from shipping is  
14 estimated to be equal to that of the sixth largest nation. Now  
15 they are finding, and as Dr. Clipper said, they're facing on  
16 more and more emission requirements from the EPA. There is  
17 also a new International Maritime Organization sulfur emission  
18 limits that our shipping industry has to reach.

19           Now here in Western Pennsylvania, we don't have a  
20 robust ocean shipping industry. But on the Eastern side of the  
21 State we do, you know, the Port of Philadelphia. And so when  
22 these ships come in, they have to use ultra-low sulfur but  
23 higher cost diesel, they have to install specialized equipment  
24 to capture sulfur emissions, and burn low cost heavy fuel oil,  
25 or convert to a dual-fuel engine and burn low cost and clean

1 burn LNG. Here in the Pittsburgh region, our inland waterways  
2 marine community is facing that similar situation. The  
3 Pittsburgh Region Clean Cities group, which created the  
4 consortium of Clean Fuels Clean Rivers, is focused on a  
5 regional emissions reduction effort among the marine vessels on  
6 the rivers. This effort involves several companies that have  
7 come together to facilitate the evaluation of LNG as a low  
8 emissions fuel source for a harbor towboat. And this is what  
9 we're going to be doing in our project that we kicked off  
10 already.

11           And the reason we're doing this is because America  
12 is undergoing an energy revolution. You know, everybody knows  
13 that, everyone talks about it, we constantly say it. And in  
14 2012, oil and natural gas development supported 2.1 million  
15 jobs, and is projected to support 3.9 million jobs by 2025.  
16 According to the Federal Energy Regulatory Commission, or FERC,  
17 here are more than 110 LNG facilities operating in the United  
18 States performing a variety of services, and FERC currently  
19 regulates only 24 of them. Some export natural gas, some  
20 provide natural gas to the interstate pipeline or local  
21 distribution companies, while others store natural gas for peak  
22 demand periods or produce LNG for vehicle or industrial use.  
23 But the added beauty is LNG is not limited to only exporting.  
24 It's a fuel that we use right here in the Commonwealth.

25           As Governor Wolf said in March 5th, 2015 when he

1 reversed the state tax increase on the LNG, the Governor said,  
2 one of my goals is to promote and develop a comprehensive  
3 energy portfolio for Pennsylvania that supports clean energy  
4 alternatives to imported petroleum. Liquefied natural gas is  
5 not only a cleaner alternative to diesel, generating lower  
6 pollutant emissions when used for fuel vehicles, but it's also  
7 produced here in Pennsylvania from abundant natural gas  
8 reserves. Now, we've heard from others today along with what's  
9 being reported in the Philadelphia Inquirer, natural gas  
10 production in the Marcellus did rise 28 percent in 2014, and  
11 this is even with that reduced rig count. According to the  
12 Energy Information Agency, this accounts for 36 percent of the  
13 overall natural gas production in the United States.

14           There's a lot of statistics out there as to what  
15 does this mean for the Marcellus production. The Marcellus  
16 Shale Coalition has these facts out there on their website,  
17 that Pennsylvania's production has another breaking record  
18 exceeding four trillion cubic feet of clean burning energy in  
19 2014. We had positive gains in job creation of 45,000 good  
20 paying Union jobs, more than 243,000 Pennsylvanians working  
21 across the industry, \$640 million paid in impact fee taxes,  
22 something that some people don't cost. And investments in  
23 energy production facilities such as UGI's Corporation \$160  
24 million, 35-mile pipeline to deliver abundant supplies of clean  
25 burning shale gas to a planned 1,000 megawatt power plant in

1 Snyder County, while also creating over 800 new jobs. That  
2 four trillion cubic feet of natural gas will heat 60 million  
3 homes for one year, and generate 400 billion kilowatt hours of  
4 electricity, and fuel 48 million natural gas powered vehicles  
5 for one year.

6           So we have the gas. You know, and as Dr. Clipper  
7 said, we have it. What are we doing? So as Pennsylvania  
8 explores the development of natural gas vehicles,  
9 infrastructures and economic opportunities, don't forget  
10 there's other people doing the same thing. Natural gas in all  
11 forms is being developed, used, expanded, and explored  
12 nationally and globally. I have some hand outs, I think you  
13 may already have it, on the cruse ships and tugboats project  
14 that are happening around the world. And the tugboat project  
15 is happening, and it's happening in Japan.

16           So Pennsylvania needs to look beyond the routine and  
17 seek out opportunities that take advantage of an abundant  
18 supply of natural gas, and the Commonwealth's unique location  
19 along the Eastern seaboard with access to inland waterways and  
20 tremendous intermodal systems, especially after the DEP looks  
21 at their grant and what they're offering for conversions and  
22 for opportunities. Don't look just at passenger vehicles or  
23 long haul trucks. Don't limit yourself to that because the  
24 marine community and the equipment community can also convert  
25 and make significant changes in reductions and emissions here

1 in the Commonwealth. I'd like to turn things back over to Dr.  
2 Clipper for any last comments.

3 MS. CLIPPER: Okay. Well, that pretty much sums it  
4 up that we believe that natural gas is making an inroad in the  
5 inland waterways. So we're looking forward to seeing this as  
6 hopefully making everyone aware that natural gas has the  
7 ability to provide not only clean, reliable, local, abundant  
8 service waters, but we can preserve our waterways, the economy,  
9 and our quality of life if we appropriately and responsibly use  
10 this natural gas. Thank you very much.

11 CHAIRMAN HUTCHINSON: Thank you. It was a very  
12 unique angle that many people do not think about, and that is  
13 our inland waterways. And I just want to put a question out  
14 just generally about that. I know you worked very closely with  
15 these companies, because I mean, even if you go down the Three  
16 Rivers and you see all the barges, et cetera. And what do you  
17 think is --- to get those kind of things converted, is it going  
18 to be more about --- I mean, we have a chicken and egg  
19 situation there, too, because we need the boats, we need LNG.  
20 But we also need a way to fill them up. And which part of that  
21 equation do we work on first? Or do they have to go  
22 simultaneously? Or I mean, maybe there's something in place  
23 already where it's easy to fill these LNG. I don't know that.  
24 But I'll let you to expand on that.

25 MS. OLIVER-STOUGH: Well, it's kind of a situation

1 where with the tugboats that we're working with, there is not  
2 an LNG supply readily available. You know, but the way we've  
3 overcome that is working with a truck delivery and doing  
4 delivery by truck. And in the meantime, other people are  
5 looking at development as LNG refueling to support the marine  
6 community. So as Dr. Clipper mentioned, she has talked to more  
7 of them than I have. You know, they're a little reluctant to  
8 change because it's not a proven technology. We're taking over  
9 the road's technology, and designing it and working with it for  
10 marine application. So working with some very --- on a river  
11 system. You know, it's been used. You know, there's been a  
12 lot of marine conversion for ocean like vessels, but not for  
13 the river systems.

14           So this is the first time that this is being done.  
15 And so there's challenges. There's going to be things they  
16 have to be proven, and then the emission studies to show that  
17 whether or not it actually does work. You know, our goal is  
18 not to go into this project with preconceived outcomes. We're  
19 going in very open minded of here's what we think we can do,  
20 here's what we're going to do, let's see if it works. And then  
21 we take it from there. And that's the attitude that the  
22 Department of Transportation Maritime Administration has asked  
23 as well, that we would go in with that attitude and take a look  
24 at what we can actually find. So the good thing is that  
25 because we understand what natural gas can do, and we do know

1 that there are fleets that have been using natural gas, not  
2 only in over the road, but also off road applications with  
3 these fuels, that we have a cyclative positive outlook as to  
4 what we believe we think we should find. But we do want to go  
5 through this process as we're taking a look at this technology.

6           One of the things I can tell you is that I worked  
7 with a group of contracts done for this particular application.  
8 And in doing so, we took a look at what numbers and what kinds  
9 of engines would be available for this type of vessel. And one  
10 of the things that we alluded to earlier is that when you're  
11 dealing with these kinds of vehicles, every different vehicle  
12 class has a type of engine that would best suit those needs.  
13 So for these particular vessels, it's really at the high end of  
14 a lower type of horsepower engine, and the low end of a higher  
15 horsepower engine. So that's quite a dilemma in being able to  
16 come up with one.

17           So having looked at Selva (phonetic) and  
18 Rolls-Royce, and all the other kinds, and CAT, and you know,  
19 looking at that, and Cummins, trying to figure this out, you  
20 come to many different areas where you're trying to work on  
21 trying to figure out, okay, what can actually be done? And  
22 then once you even try to get past that, then it's about which  
23 fuel, the CNG or the LNG? And one of the things that we  
24 learned through the group of contract was with the amounts that  
25 would be necessary for this type of vehicle --- or vessel,

1 rather, you have placement issues with respect to the vessel,  
2 and then ballast and buoyancy kinds of concerns.

3           So after taking a look at what kinds of things could  
4 be done and where to put these vessels, and coming to the  
5 conclusion about even looking up the tires of the all best  
6 placement, we could not come up with as many of the continued  
7 vessels that would be required for the type of fuel needs that  
8 we need for a run. Because what you don't want to do is have a  
9 system that's going to create inconvenience for the user, that  
10 would also be interpreted as a reason why not to use this kind  
11 of fuel. So we want to make it as seamless as possible, as  
12 much as possible comparable to what they find is in their  
13 heavier fuel use application. So that's the easy problem.  
14 When you look at this and you think about 3,900 tugboats in our  
15 region, 112 fleets in our waterways and have run through this  
16 area, it's worth a look. So we want to continue to do what we  
17 can to make sure we're meeting those needs, and that's what  
18 this produces out.

19           CHAIRMAN HUTCHINSON: Thank you. Senator  
20 Bartolotta?

21           SENATOR BARTOLOTTA: I have a question. You were  
22 saying tugboats. my dad actually has a --- works for a towing  
23 service back in Ketchikan, Alaska. So my question for you is  
24 --- they're pretty fond of their petroleum up there. We'll  
25 just leave it at that. But for my question for you is you have

1 made comments about the difference between fresh water versus  
2 blue water, you know salt water. Are there pros in this  
3 perhaps within respect to the tanks that might be used for CNG  
4 versus LNG?

5 MS. CLIPPER: The water --- I'm sorry, water itself  
6 on the vessel and in the deterioration of the vessel. The  
7 cylinder should have use for the containment of the fuel  
8 itself. That's not a problem for that and where they would be  
9 placed and how they would be taken care of. It's about the ---  
10 because with the LNG, it's truly like a thermos vault that  
11 you're really dealing with. And in the different types of  
12 tools that are used now, that's not a problem at all for that.

13 And even for if we were looking at if it even could  
14 have been possible for the amount of fuel for a CNG, we have so  
15 many now. There are more and more of these --- even from our  
16 area, from our area, CPI Industries (phonetic) in McKeesport,  
17 they are like a worldwide supplier of containment vessels for  
18 onboard fuel storage. And they have recently just introduced a  
19 new type for sale, so that would have been another option that  
20 would have been available. But that corrosiveness was not  
21 about the cylinder for the onboard fuel storage, it was about  
22 the vessel and the longevity of the vessel itself, what could  
23 be the repowering, and that's why it's being used more and  
24 more. And you know, when we tool the engine, it was back and  
25 forth, so we use that again. So ---.

1           SENATOR BARTOLOTTA: Well, we know at least with  
2 CNG, you know, nothing drips on the ground under a vehicle or  
3 anything. And depending on if the application, CNG versus LNG,  
4 depending upon the size of the engine needed and the use for  
5 that vehicle, whether you're towing something, I guess, or  
6 whether it might just be for ferry transport or for rescue or  
7 any of those applications, is CNG still an option? Is CNG  
8 something that's used for green transportation, or is it just  
9 strictly the LNG?

10           MS. OLIVER-STOUGH: More LNG.

11           SENATOR BARTOLOTTA: Because what my question is, we  
12 see what happens when we even put one drop of diesel fuel in  
13 water.

14           MS. OLIVER-STOUGH: Right.

15           SENATOR BARTOLOTTA: You've got a shiny rainbow that  
16 just keeps going and going. What happens with the LNG should  
17 there be some kind of spill? What is the difference in the  
18 pollution value or affect between say diesel spill versus and  
19 LNG spill?

20           MS. OLIVER-STOUGH: It dissipates like non-methane  
21 does, yeah, natural gas ---. I mean, we have a great thing  
22 here, we'll have to send it to you. It's a real short video on  
23 LNG and what happens. And you can actually have it in a bowl  
24 and stand over it and breath it in, it doesn't cause any  
25 problems. It just goes up and dissipates.

1           SENATOR BARTOLOTTA: Well, I mean ---.

2           MS. OLIVER-STOUGH: The main thing with LNG is the  
3 handling on the fueling part of it, because it is so cold. And  
4 so there's a lot of safety considerations for that, on the  
5 handling of it.

6           SENATOR BARTOLOTTA: So it sounds to me like even in  
7 personal vessels, you know, in years to come ---.

8           MS. OLIVER-STOUGH: Right.

9           SENATOR BARTOLOTTA: Even when you see an arena, for  
10 instance, people gathered together at the river to watch  
11 fireworks or to do whatever, you know, just the noise pollution  
12 would be reduced, the fumes addressed. And I'm just wondering,  
13 I'm curious about maybe the heat factor of an engine running,  
14 the ripple effect, what that does versus diesel.

15           MS. OLIVER-STOUGH: Yeah, what our guys are telling  
16 us --- we're working with a lot of marine engineers and a lot  
17 of experts in this field who worked on the ocean side of it,  
18 and also a real good part of this project. And they're very  
19 optimistic about what we can do with a tugboat. And then just  
20 a boat, you know, that same concept of we deal with the rest of  
21 the commercial traffic on the riverways, and then the  
22 recreational vehicles and the opportunities there. And so it  
23 exists, I think it can happen.

24           Do I think it can be successful? It's just a matter  
25 of time taking the time to do it, and that's why this project

1 is so important because it's the first one. And so it's come  
2 up with that technology. And as Dr. Clipper said, there's a  
3 lot of different technology which has been coming onboard now.  
4 Even to be made with the fashion, your paint systems to the  
5 shape of the deck. You're not restricted to just a big huge  
6 cylinder sitting on your deck. You know, they do make these  
7 flat kind of tanks that are hung for it on the back. I mean,  
8 it's really amazing what they can do.

9 MS. CLIPPER: Right. And it's super cold fuel  
10 that's going to the engine, and it's going to be aspirated and  
11 introduced into the engine. So to heat up the engine and the  
12 waste heat that you're talking about, it's not going to be  
13 additional from what you would have from the typical burn of  
14 the engine. You know, it's not going to be like the highest  
15 heat. There's not going to be some kind of additional latent  
16 heat kind of thing, and then you're going to have some  
17 additional heat because it was an LNG burn. You're going to  
18 use the LNG as you would for that type of an engine.

19 SENATOR BARTOLOTTA: Right.

20 MS. CLIPPER: And then that's just going to give off  
21 the same kind of placed heat. So it's not going to be  
22 exorbitant to the ---.

23 SENATOR BARTOLOTTA: I was just wondering the  
24 differences, because I've never experienced that. I've been in  
25 the --- again, as a witness with a commercial fisherman, and

1 you could hardly seeing walking through the engine compartment,  
2 you know.

3 MS. OLIVER-STOUGH: Right.

4 SENATOR BARTOLOTTA: And again, just the fumes and  
5 the heat that it gives off. I was just curious about the  
6 difference between the two.

7 MS CLIPPER: Right. One thing though, it's one of  
8 these things that we will be able to get more information on.  
9 But just what we know about how an LNG is when you introduce it  
10 into a class A truck, you know, what's going to happen there.  
11 You're not going to have additional engine heat build up  
12 because of using LNG as a fuel source.

13 SENATOR BARTOLOTTA: Thank you.

14 CHAIRMAN HUTCHINSON: Representative Saccone?

15 REPRESENTATIVE SACCONE: Thank you, Chairman. And  
16 thank you for your testimony, and we appreciate you coming out,  
17 too, and participating. I hope the truck that's delivering the  
18 LNG to the tugboats is run by natural gas emissions.

19 But my question is --- of course, a lot of my  
20 district is along the rivers and I have grown up seeing all  
21 those tugboats and I've often wondered about that potential  
22 like what I'm just hearing. Did you work out the cost to  
23 convert --- what the payback might be for somebody who converts  
24 or uses LNG for their tugboat? How long would it take them to  
25 be paid back? Let's just say they have 24 hours a day and the

1 three shifts they're running, it seems like their payback time  
2 would be short for them. Do you know? Do you have any figures  
3 on that?

4 MS. OLIVER-STOUGH: I would say not yet. I mean, we  
5 have what we think it will be. But until we actually do it  
6 because we are developing that actual conversion, you know,  
7 we're not really sure just yet. We know the first time, as  
8 with anything, it's only going to go smoother as it goes. So  
9 once we get it down, we figured out what went well, what  
10 didn't, what would we have changed, how could we have done  
11 better, then you can do the next one. And you apply those  
12 lessons learned, and it should be lower. And as it goes on and  
13 you try different kinds of revenues and different kinds of  
14 applications, the price should come down. I think that was the  
15 roadblock, that the marine community had initially their  
16 perceptions on conversions.

17 MS. CLIPPER: Right. And that's why we said if it's  
18 possible, to expand the consideration for opportunities of  
19 programs to assist with these kind of conversions. And it's  
20 interesting that our particular project is about conversion, so  
21 you have been an astute panel to pick up on that. We're not  
22 really talking about a full out engine replacement, which was  
23 another thing that was a concern to the operators in our  
24 region. Because of the cost as we're looking at this for an  
25 engine replacement at this time, and those individuals looking

1 at the power in their vessels, then they want it. They have a  
2 viable option, something that could be economically feasible  
3 for them.

4           So from a conversion perspective, this is why they  
5 were very interested in our project, because we set a very  
6 specific space in this technology. A lot of people want other  
7 areas, the Great Lakes and including some of the other ocean  
8 born vessels are looking at full out replacement. But we're  
9 looking at a particular area because we have a lot of  
10 individuals here who want to keep their vessels, want to use  
11 them to find out what can we do? What else can we do?

12           So you know, as Susan had said, we're taking a look  
13 at this and trying to answer all of those kinds of real  
14 questions that operators would have.

15           REPRESENTATIVE SACCONI: Thank you very much.

16           CHAIRMAN HUTCHINSON: All right. Thank you for your  
17 testimony, and we appreciate you coming up today.

18           MS. OLIVER-STOUGH: Thank you.

19           MS. CLIPPER: Thank you.

20           CHAIRMAN HUTCHINSON: Next I will call Mr. Chuck  
21 Half, Projects and Productivity Manager for Veterans  
22 Transportation Management, LLC.

23           MR. HALF: Can I have that? I have a presentation.  
24 Technology is always good. All right. Good afternoon. Can  
25 you hear me all right?

1           CHAIRMAN HUTCHINSON: Yeah, we're good. Thank you.

2           MR. HALF: It's an honor to testify today from a  
3 ground transportation fleet operators' perspective on the  
4 environmental benefits of natural gas vehicles. And being the  
5 last of the presenters means that I am now in between you and  
6 food or some other break. As the slides are coming up, one of  
7 the things that --- and in the handout presentation I gave you,  
8 I did not include any of the visuals that you'll be on the  
9 lookout for while I'm going through this. But one of the  
10 things that I wanted to present to begin with is in the next 15  
11 minutes, I'll be providing some answers to basic questions.

12           The VETaxi and VETrans Division of Star  
13 Transportation Group operates within 180 vehicle fleet 26  
14 dedicated compressed natural gas vehicles, one bi-fuel  
15 compressed natural gas, CNG, and gasoline vehicle, three  
16 dedicated electric vehicles, and approximately 40 propane  
17 vehicles. The 40 propane vehicles really do not operate under  
18 the VETrans division, and I'll come back to some of that a  
19 little bit later.

20           Are they bi-fuel or dedicated CNG only? The 20  
21 mobility ventures MV-1 manufactured in Indiana by AM General  
22 are factory built for to compress natural gas. We use 20 of  
23 those. Six of them are Ford TransitConnects. Those were all  
24 conversions and dedicated 100 percent to CNG. And the Lincoln  
25 MKT bi-fuel CNG is warrantied by Ford and Lincoln, but was

1 converted by a QVM, qualified vehicle manufacturer, or  
2 modifier. Of the CNG from the factory conversion kits, as I  
3 just outlined; 20 are factory, six are converted, and one other  
4 was converted, for a total of seven.

5           Any challenges or recommendations and regrets? So  
6 this is the idea, you can tee up all your thinking and thoughts  
7 as I go through this. The customer operational standpoint?  
8 No, no regrets. From the maintenance standpoint, it has been  
9 brought out a little bit, we've got this need for a more or  
10 different training of mechanics.

11           Approximately how much money do you think CNG has  
12 saved you in the last year? Probably the last year I've got to  
13 say is 2014, not getting into 2015, it's a 40 percent saving in  
14 fuel costs, and a saved 10 percent in engine maintenance. One  
15 of the things that hasn't been brought up is the loss of ten  
16 percent in unscheduled fleet downtime from preventative  
17 maintenance because of the culture that was alluded to earlier,  
18 a little bit of the mechanics who may not want to move forward  
19 with newer technology.

20           So now what I'd like to do is go a little bit  
21 further into some of the details on each of these areas. But  
22 before I do that, I guess I have to do the promotional slide of  
23 the company and the background. Star Transportation Group is  
24 locally owned and operates with 100 percent of its profits and  
25 administrative expenses remaining in the Pittsburgh area. STG

1 focuses a lot on leaving no customer behind. The VETrans  
2 division uses military veterans as its drivers. And therefore,  
3 it's a Job for Vets program, but also it certainly supports the  
4 leaving no customer behind and helps folks here with a military  
5 background. We're certainly at the Star Transportation Group a  
6 proud community contributor to entrepreneurship, small business  
7 development and veterans related activities.

8           The average salary --- or excuse me, the average  
9 wage for gross receipts that a taxi cab driver can receive is  
10 approximately working 10 hours a day, 50 hours a week as an  
11 independent contractor. It is a non-union position. As an  
12 independent contractor, they gross approximately \$75,000 a  
13 year. So that's a taxi driver who's on the streets all the  
14 time, and that's in a ten hour day. I mention that because I  
15 think the downtime issue is something. The availability of CNG  
16 stations would give a dedicated fleet all the time utilization  
17 factors. Time is money, whether it's to the driver or to the  
18 fleet owner.

19           It's something I need to have you think about, as  
20 legislatures and influencers, how to make this great resources  
21 really productive to the bottom line of a company, and put it  
22 into the pockets of the individuals who are involved, whether  
23 it be the mechanics or whether the drivers. So as we'd like to  
24 think we're a progressive taxi or ground transportation fleet,  
25 we also have the Paratransit Division. We also happen to have

1 three taxi divisions and our Limousine and Car Services  
2 Division. And 65 percent of the fleet runs on alternative,  
3 non-gasoline, non-diesel fuel.

4           So the first vehicle I'd like to look at, of which  
5 we have few of, but I think it signifies some of the challenges  
6 that a little bit have been addressed before, and it's the  
7 Lincoln MKT. Now, there's a lot of Lincolns, there's a lot of  
8 MK's, and a lot of initials, and there's a lot of alphabet soup  
9 in the automobile and the trucking industry. But the point I'm  
10 going to be trying to make here, and you're not supposed to  
11 read any of this on the board, and even in the handout I don't  
12 even provide a lot of it, but one of the things is that we have  
13 a Lincoln MKT as part of our VETaxi White Glove car service  
14 fleet. It operates as a Public Utilities Commission regulated  
15 limousine able to operate on a time-based rate. It's a bi-fuel  
16 gasoline and CNG option that we like very much, with the  
17 manufacturer 100 percent behind its CNG operation. This is  
18 very unusual in the original equipment manufacturer automobile  
19 industry. CNG delivers no loss in horsepower as we've heard  
20 already, no loss in mpg as you've heard already, and plenty of  
21 environmental benefits as you've heard already over gasoline or  
22 diesel. Our perspective is we use them because they're good  
23 vehicles.

24           Inside the Lincoln MKT, and I have it here because  
25 it's a piece of information that I included in the testimony

1 for you a little bit, and I'll send it to you if you want more  
2 technical detail, but it's this challenge of what's called the  
3 coalescing filter. This is a little piece of gadget that  
4 really is installed with every CNG system. The CNG travels  
5 through a short high pressure fuel line whenever it's  
6 compressed, and enters this filter which removes some aerosol  
7 compressor oil, oil droplets, and other contaminants from the  
8 CNG. Overtime, the CNG compressors start to have normal wear  
9 and tear. This leads to compressor oil making its way through  
10 the CNG fuel station dispenser to your vehicle. This filter  
11 will prevent this from happening, and keep your CNG vehicle  
12 components operating properly.

13           The filter must be changed by an authorized  
14 technician. This is the key challenge in what we talked about  
15 before with the maintenance change. I's not really a whole new  
16 mechanics course. It really is a culture change, a little bit  
17 like a catalytic converter, but no different than going digital  
18 with a thermostat in the house rather than the analog sort of  
19 spring fit thing. You got to have a battery now, maybe you  
20 didn't have to have a battery before. Smoke detectors maybe  
21 now are connected to wires and power systems in the house,  
22 where yesterday they were attached to the batteries with any  
23 one of them instantaneously supporting the back up. Then you  
24 get all these issues that the backup batteries die and the  
25 electricity doesn't. So we know regulations change. My point

1 is as legislators, you're really on top of code and variation  
2 as to what can be done, and you're falling short. Not on the  
3 filter that's in the CNG vehicle, but some things I'm going to  
4 get to. It comes to the incentives and looking at the fleet.

5           But the filter is an area, again, if you're thinking  
6 about an entire system, which is what I want you to think about  
7 as legislators, is the entire system. If you have bad natural  
8 gas in the station, whether it's too wet, not dry enough, then  
9 you're putting more wear and tear on these filters. These  
10 filters become a maintenance headache if the infrastructure  
11 isn't built appropriately, and every form is not maintained  
12 like it is appropriately. So again, it's not safety, it's just  
13 sound business. Affective maintenance generates cash, whether  
14 it's cash for the fleet operator, cash for the CNG producer,  
15 cash for the busses taking things from point A to point B. If  
16 you don't have affective maintenance throughout the system, you  
17 really are losing cash.

18           Enough on the filter. Let's look at the reality of  
19 in a Lincoln MKT, look at what happens in the vehicle.  
20 Passenger, consumer vehicle, whether it's bought by a resident,  
21 a citizen, or it's used by us as a limousine car service  
22 vehicle, you've got an --- in a bi-fuel vehicle, you have an  
23 extra case. That means you have two fuel gauges to watch.  
24 Maybe that's cool, maybe you feel more muscle if you've got an  
25 extra gauge. Maybe that's a really cool thing. Then when you

1 open up your fuel tank, you've got an extra little valve there.  
2 So you got your regular gasoline valve in the bi-fuel, but then  
3 you have that nice compressed natural gas little nozzle hole  
4 there as well.

5           But you do have a problem, and it was alluded to  
6 before by one of the other speakers. You may not be able to  
7 see it well, but that's the rear front area in this Lincoln  
8 MKT. About one-third of it is fully gone. Most people say  
9 two-thirds of it is gone because you've added a compressed tank  
10 to go along with the gasoline tank. This is not an OEM design  
11 for the compressed natural gas, it is a QVM, qualified vehicle  
12 modified conversion. So when you think of conversions, are you  
13 incenting someone to screw up a design that was designed not to  
14 have the conversion? If you're not incentivizing a conversion,  
15 then you're really going back to the equipment manufacturer,  
16 rig the OEM to see their design for you.

17           This is an area you have to think about. How do you  
18 link this legislatively or incentive wise? Back to the OEM  
19 side, you get them to give us all the vehicles that the CNG  
20 consumers could use. We know the numbers are there. We've  
21 seen some of that. You've heard that today. Fleet,  
22 residential, we have the resource and fuel. Why do we not have  
23 the vehicles? Why is it so hard to get the vehicles to be in  
24 place?

25           So the next thing I want to get to is this little

1 --- what is sort of like a London taxi on steroids, and it's  
2 this vehicle called a Mobility Ventures Vehicle made in ---  
3 about five or six years ago they came out in Indiana. They're  
4 made now by American General. With this particular vehicle,  
5 you don't lose the luggage space because it's an OEM design.  
6 So you've got 25 cubic feet of luggage, you can see some of the  
7 space in the next slide I'm going to get to. And you also can  
8 just go through and fuel up as you do at any retail station  
9 where there is the retail. You have one fuel gauge, and you  
10 only have the CNG tank to be filled. In our VETaxi/VETrans  
11 group, we have 20 of these OEM designed and built vehicles, and  
12 we just love them. No problem with Pennsylvania hills.

13           One of the added advantages with these particular  
14 vehicles is that they happen to also be 100 percent American  
15 Disabilities Act enabled. So there's a ramp that's under the  
16 floor. That means you have room for three persons, plus a  
17 service animal, plus a fourth person riding in the wheelchair  
18 up front. Or you can use them for package delivery, because  
19 obviously a dolly can go up and down that ramp just as well as  
20 someone in a power chair or scooter. Think now, how many taxi  
21 fleets are there in Pennsylvania? How many taxi fleets do or  
22 do not support the American disabilities community, or the  
23 aging community? I think Pennsylvania has an increasing aging  
24 population. How many vehicles could and should be maybe look  
25 like this? And you can service them and they can all run on

1 CNG by design.

2           So let me go back to Star Transportation Group a  
3 little bit and incentives, because now we're going to get to  
4 some of the things you care about and that you can influence.  
5 In 2014, the Pittsburgh Electric Commission Deployment Project  
6 provided \$50,000 to us to look at 50 electric vehicles. In  
7 present, we have three Tesla vehicles, 100 percent of dedicated  
8 electric in our car services group in VETrans/VETaxi. In 2013,  
9 we purchased this Lincoln MKT I mentioned to you about and to  
10 convert that using AlTech Eco into the CNG vehicle. The  
11 warranty by Ford flows through even though you convert the  
12 vehicle to the CNG. That is also highly unusual that any  
13 manufacturer supports the warranty if you convert. I don't  
14 know what happens in the tugboat industry, I don't know what  
15 happens in the compressor industry. But any conversion usually  
16 screws up by some nice legal language the OEM warranty. And  
17 that's something that any conversion in history has to look at.

18           In 2012, under a Compressed Natural Gas Taxi  
19 Deployment Project, \$156,000 went towards 25 CNG vehicle  
20 acquisitions. Six were converted from Ford Transit Connects,  
21 20 were these dedicated purchase from a factory CNG vehicle.  
22 So if you divide the money on that, that's about \$5,000 to  
23 \$6,000 per vehicle; not enough to take care of the acquisition  
24 cost of the CNG upcharge. So even though there's a subsidy, it  
25 still doesn't, as a fleet owner, take care of the full boat.

1 I'm not saying it should, I'm just letting you know that's a  
2 fact. So for this chart that's on the next page that you don't  
3 have in any of your written testimony, it really sort of says  
4 the miles per gallon and vehicle power underload with CNG has  
5 zero disadvantages to day-to-day operations. However,  
6 something I do want to point out and have you remember, each  
7 vehicle averages in our taxi fleet approximately 5,000 miles  
8 per month or 60,000 miles per year. You know, 60,000 miles per  
9 year is probably more than most citizens usually would do in  
10 their normal day to day. So it's a transportation ground fleet  
11 where you consume that hundred miles.

12 I'm not a statistician. Others can talk about the  
13 environmental benefits of CNG. But the chart that's on the  
14 screen there talks about if there were 44 CNG passenger  
15 vehicles in the City of Atlanta, and that would be different in  
16 Atlanta versus Pittsburgh, you get this magical benefit of  
17 getting the CNG is better for the environment than gasoline.  
18 It replaced a huge number of pollutants. The small vehicles  
19 running ten hours a day, as I said, to generate revenue,  
20 there's a lot of utilization. The same idea with the FedEx  
21 trucks. They're out there all the time.

22 What incentives are you providing really for fleet  
23 owners? And by the way, customers told us green is good, but  
24 not as important as consistently dependable service. In other  
25 words, from your perspective to the voter's perspective, green

1 is nice to have. It's not the thing that's their first  
2 priority when you get toe passenger fleet transportations. And  
3 they probably don't think about it at all, except it's nice to  
4 have when the FedEx truck comes here and it's on time  
5 delivering.

6           Where do we save our money? Forty (40) percent in  
7 fuel costs; that savings is great. However, we've heard about  
8 what we call in the driver business range anxiety. It's very  
9 stressful. In our case, at VETaxi/VETrans, we have a contract  
10 with the VA Medical Center for medical center transports of  
11 persons in a wheelchair. Some of those transports are back to  
12 Morgantown, to Altoona, up to Erie. Where are the CNG  
13 infrastructure? How much stress do you want to put on that  
14 person who's driving, let alone the patient? So we need more  
15 of those. We need a way to resolve that infrastructure and  
16 having stations around here.

17           Ten percent engine maintenance cost savings is  
18 great. As you heard earlier, cleaning burning fuel extends the  
19 engine oil life by an argued 25 percent, reducing the number of  
20 oil changes needed. Coalescing filters, which I mentioned, are  
21 more expensive as parts. It's also an additional type of  
22 filter and part than when you traditionally think about the  
23 gasoline and diesel world, and it causes more bad stuff if the  
24 preventative maintenance culture is not changed. So as a  
25 mechanic, it's not that the CNG is the problem. It's are you

1 doing your maintenance, and doing your job, and doing the  
2 preventative stuff on time when you should do it? Ten percent  
3 additional unscheduled downtime reduces the utilizations rates,  
4 as I mentioned before.

5           Let's get to some of our realities. We have a  
6 higher fleet acquisition cost. If you use a CNG vehicle,  
7 you're going to pay more to acquire it with that upcharge;  
8 approximately \$8,000 to \$10,000 more. In our case, we add on  
9 our American Disabilities Act fee, so our vans, our sedans, our  
10 steroid looking sedans actually cost about \$15,000 more. I'll  
11 come back to that a little bit later. There are lower  
12 operating costs. Competitive customer advantage; going green  
13 is good, and we certainly know lowering the regional carbon  
14 footprint is good. Government policy people, with the Mayor,  
15 the County Executive, anywhere these operate in your territory  
16 is good. Green is good. Even if you're not a tree hugger,  
17 green is good because this green costs you less. Marketing  
18 laws ---.

19 OFF RECORD DISCUSSION

20           MR. HALF: Pardon?

21 OFF RECORD DISCUSSION

22           MR. HALF: Okay. So everything I've said has ended  
23 up on the floor. Did I read anything on there? Okay? So from  
24 a VETrans standpoint, we're going to say we're in the Western  
25 Pennsylvania area for the Star Transportation Group. The role

1 of really the VETrans division is to take the model of CNG  
2 vehicles or electric vehicles, alternative fuel vehicles,  
3 veterans as drivers, or family members of veterans as drivers,  
4 and we're very strong proponents of the American Disabilities  
5 Act community, and to take around the country or around  
6 Pennsylvania and the communities and really licensing the  
7 intellectual property of this Delivery Ground Transportation  
8 Model. We also use smart phone apps and things of that nature.

9           We're not the same business as that some people call  
10 as a two four letter word of transfer, driver, and companies.  
11 But we love them because it deals with the big issues you guys  
12 don't like to deal with, which is regulations. And the  
13 disruption is good, and I'll get into that.

14           So the marketing side of having CNG is very good for  
15 us to really go around the country and talk about this because  
16 it's again --- it's a lower cost entry board of operations.  
17 Recruiting advantage, veterans as drivers. If you know go to  
18 anyone that's a veteran and you talk about CNG, now you're  
19 hitting on sort of this what we call the Red, White and Blue  
20 sort of model. And when we have USA made vehicles, USA made  
21 fuel, veterans who served the USA, it sounds like a cool  
22 marketing thing. So we may make some money with that because  
23 it's different and not part of this business.

24           So let's look at the PA legislative incentives and  
25 disincentives. I understand --- I spent six and a half years

1 working for the mayor in the City of Pittsburgh before the new  
2 mayor came in, as a City Innovation Performance Officer or  
3 Manager. And one of the things that you learn is leadership  
4 challenges of regulatory disruption and connecting the dots is  
5 hard. It's really difficult sometimes when you change the  
6 direction of the battleship with a rowboat. And I think each  
7 one of you have that responsibility. You're in the rowboat  
8 trying to figure out how do you move a battleship in a  
9 different direction whether it's red, blue, whatever the color  
10 is?

11           So recognizing how difficult it is, why is it that  
12 in Pennsylvania's New Transportation Funding Law Summary of Act  
13 89 of 23 is so willing to talk about changes to vehicle  
14 registration fees, but there's no incentives for alternative  
15 fuel vehicles of any class.

16           So the State goes ahead and comes up with say we  
17 need to put more money into transportation projects. And it  
18 looks at how they can look at things and make some changes, but  
19 they don't look at anything with alternative fuels. It's a  
20 missed opportunity. So if you look at changes to traffic  
21 violation fines or surcharges in permits, in that particular  
22 clause, funds can be dedicated to public transit. Why can't  
23 you decide to dedicate programs to alternative fuel? Could  
24 they not have also go into building alternative fuel stations?  
25 We didn't do it.

1            Pennsylvania's Public Utility Commission rule changed  
2 in 2015. The PUC, why am I bringing that up? Well, we're in  
3 the ground transportation business. The PUC also regulates  
4 trucking industry. The PUC also regulates the utility  
5 industry. What are you doing to look to see what they're doing  
6 while you're thinking about the environment?

7            What are they doing in the Utility Commission to  
8 look at the environment? They added a new mileage burden. I'm  
9 quoting, the commissioners voted five to zero to approve a  
10 motion to replace the eight-year vehicle age limitation for  
11 taxis with a ten-year age limitation. They said you don't have  
12 to replace them after eight years. You can have them ten  
13 years. However, they added a 350,000 mile limitation,  
14 whichever comes first. Prior to this, the PUC did not have a  
15 mileage limitation. They had a review by PUC inspectors coming  
16 in to look at maintenance records. Because if you think of a  
17 fleet vehicle, and you've asked about engines and other things  
18 and rust, when you replace the engine in a vehicle, how old and  
19 what does vehicle age have to do with that now? If you replace  
20 the transmission, what does age have to do with it? If there's  
21 cancer on the body of the vehicle and it's replaced and fixed,  
22 what does age have to do with it?

23            Previously, the PUC didn't have mileage. They dealt  
24 with age. It decided to lengthen the age, and add a mileage  
25 cap. I said the average taxi goes 60,000 miles a year as a CNG

1 vehicle. When do we use 350,000? When do we hit that vault?  
2 Why did we spend an extra \$10,000 getting the CNG vehicle up  
3 there if now the PUC says you were stupid? Why do we even have  
4 our taxis with an ADA capability? It has nothing to do with  
5 PUC. Clearly we're not on the right track here as a business  
6 owner. We don't understand how the state wants to regulate  
7 this. The disincentive with a higher cost of CNG vehicles is  
8 really impacted by the 350,000 mile limit.

9           Let me go back to other things for disincentives.  
10 Recently, the Allegheny County Executive because of the PA's  
11 New Transportation Funding Law Summary of Act 89 of 2013  
12 evidently allows the local county executive in Allegheny to add  
13 \$5 onto the Pennsylvania Vehicle Registration to keep that  
14 funding locally for infrastructure projects. It seems like a  
15 good idea. No difference whether you're registering a CNG  
16 vehicle. Why did he not --- why do you not influence him to  
17 say let's exempt CNG vehicles? Not just from the fleet  
18 standpoint where we can assume, but what about the citizens who  
19 would like to get one? This vehicle that we use is used by  
20 citizens as well. So again, disincentive of the left hand not  
21 connecting to the right.

22           Let me look at another thing. Let's go to  
23 Harrisburg where some of you spend some time. I got a call  
24 before, Harrisburg Airport Authority was looking at the taxi  
25 contract that was up for review. In other words, they have a

1 primary taxi position, and if you're not the primary winner of  
2 Harrisburg, you're going to end up in a secondary location.

3           So we had looked at Pennsylvania as our Western  
4 Pennsylvania company going there, and there was some interest  
5 on the Department of Environmental Protection and the Clean  
6 Cities Initiative in that area to have a CNG station put up at  
7 the Harrisburg Airport. And it's not --- I think I can name on  
8 the top of Harrisburg Airport Authority, they're several region  
9 --- is it Susquehanna or something like that? I'm not sure  
10 what it is. But they cover more than just the Harrisburg  
11 Airport.

12           So we said here's if we had 20 vehicles or 10  
13 vehicles out there and we're servicing, we'd like to win this  
14 airport contract. We'll do all this. And so I talked to  
15 people who were looking at the bid and responding to the  
16 airport contractor for taxi. There is no incentive or benefit  
17 for two things; having a CNG provided vehicle being evaluated,  
18 no benefit. I said, what about giving the option to make that  
19 a positive on the extra bonus points? No, we're not allowed to  
20 do that because it wasn't in the RFP in the beginning. I said,  
21 what about having veterans or family members of veterans as  
22 drivers? No, we have no way to influence them to do that  
23 either.

24           So again, I know you're not responsible for the  
25 Airport Authority there. But again, if you want CNG, you're

1 going to have to figure out a way to cross some of these silos  
2 in government, if you know of any silos in government. I don't  
3 mean to sound like I'm angry, because I'm not. All right?

4 Because I think there's some tremendous things that are going  
5 on, But I think there's an opportunity from a legislative  
6 standpoint and from the federal state legislative incentives.

7           And in the testimony that I've submitted, there's a  
8 website link that has some --- is sponsored by the --- I think  
9 it's the Alternative Fuels Data Center, which does some very  
10 good clearinghouse of the kinds of incentives that are our  
11 there across different states. But I'm listing one of them  
12 here, which is a CNG vehicle rebate.

13           Whether we buy it as a company or an individual  
14 citizen buys it --- in Delaware, you get \$1,100 if you get a  
15 CNG vehicle. In Virginia, you get a \$10,000 rebate, unless  
16 you're a citizen. That's only for government agencies, get a  
17 rebate. Now, if it's the prison vehicles buying for the state,  
18 they get a \$10,000 rebate for themselves. I'm not sure I  
19 understand how this works, but it sounds like it's a good  
20 program, but it does not extend to the citizens. That might be  
21 worth looking at further, or maybe I didn't read it correctly.  
22 Nebraska has a \$4,500. California has a \$1,000 rebate for CNG  
23 vehicles. Georgia has \$2,500. Pennsylvania, what's the rebate  
24 for a CNG acquisition in Pennsylvania? I'll let you answer  
25 that question. Do you know what it is? Zero.

1           So what can you really do? All right. Here's  
2 another opportunity. Right-of-way transportation incentive or  
3 disincentives. How many right-of-ways, bus lanes, express  
4 lanes are there? How many Port Authority like in Allegheny  
5 County bus lanes are there? Why not have a CNG or electric  
6 alternative fuel bus lane exits? Oh, we can't do that. The  
7 liability is too strong, too big. The Department of  
8 Transportation at the federal level tells us whether you can  
9 switch from three persons or two persons. Remember all of that  
10 in the HOV stuff? You had to go to this --- the state had to  
11 go to the feds to get relief, three dropped down to two. I  
12 don't know who controls all this stuff, but it's just nuts.

13           Express lane access, reduce tolls for an automated  
14 and alternative fuel vehicle. I know you're not on the  
15 Pennsylvania Turnpike Commission, so obviously you can't  
16 provide an incentive that would connect to the EZ Pass if  
17 there's some sort of little CNG vehicle going through. Why  
18 don't you give them a discount? Because you don't want to  
19 incentivize CNG. You just want to talk about it.

20           Green carbon footprint versus idling rights. Diesel  
21 idling has rules; right? CNG doesn't have that problem. Are  
22 you marketing that? Are you encouraging that? Are you looking  
23 at that opportunity from an environmental standpoint.

24           How many airports are there around here? How many  
25 curbs are there? Why not do a CNG vehicle preferential

1 parking? Go to the head of the line at the airport. Go to the  
2 head of the line at the restaurant. Go to the head of the line  
3 at the parking garage. It's not a handicap spot, but how many  
4 trucks do you see at Home Depot that seem to have that little  
5 ADA sticker on it that grandma had sitting there with loads of  
6 two by fours? Right? Now, I know that doesn't happen in your  
7 area, and maybe they brought grandma with them. All right?  
8 But we don't even have anything for a CNG spot anywhere, in  
9 fact. You will see it in private areas. You will see  
10 sometimes the electron spot.

11           So in conclusion, Pennsylvania needs an integrated  
12 alternative fuel vehicle, CNG, electric, propane, you name it,  
13 whatever the fuel of the day or the week is, plan. An  
14 integrated plan. Get out of your box. Cross with businesses.  
15 Think of the business needs, think of the citizens, make it  
16 friendly. Let's provide some incentives or credits where they  
17 make sense.

18           Vehicle acquisition is a problem with the extra  
19 charges. The operating takes care of that. The bigger boys  
20 and girls, FedEx, UPS, et cetera, they can amortize that. The  
21 small fleet operators can't. So the incentive and subsidy  
22 could be there. I'm not looking for a free handout, but we  
23 need a way to make it work when the PUC puts this hard, big  
24 wall up in front of us because we were invested more in the  
25 front end.

1           We've talked a lot about the CNG retail station  
2 infrastructure, and the whole issue of the stress that that  
3 would cause, those problems with range anxiety. I think as Mr.  
4 Stark said earlier, there's a lot of opportunity for CNG buzz  
5 and marketing. Maybe there's some contest or a business  
6 contest you could have with some incentive for ideas, or ways  
7 to make the Pennsylvania image look like we cradle the grate.  
8 We love CNG.

9           I don't know what the answer is, but then create a  
10 roundtable, a workshop. Get people together. Cost is the  
11 silos that seem to be in place. Thank you very much for  
12 listening to me. I do love you all for coming. All right?  
13 Finleyville is a good place to visit. Thank you.

14           CHAIRMAN HUTCHINSON: Thank you. Representative  
15 Saccone has some questions.

16           REPRESENTATIVE SACCONE: Thank you. Thank you for  
17 your testimony. And as I saw and heard you testify at a number  
18 of other hearings, always good information. I see taxis all  
19 around in the Pittsburgh area, and it's a really great effort  
20 in the attempt to get a veteran choosing veterans. Good job.

21           MR. HALF: Thank you.

22           REPRESENTATIVE SACCONE: Do we have a problem ---  
23 you kind of alluded to this earlier in your testimony. Do we  
24 have a problem with the gas in the filling stations? Is it not  
25 consistent? Is there some that's too wet or whatever?

1           MR. HALF: No, we really don't have a problem with  
2 that. It's just that the filters are designed to do their  
3 jobs, and they do it well. The real issue is not the filter or  
4 the fuel, the real issue is the personnel who are supposed to  
5 watch out for the filter.

6           REPRESENTATIVE SACCONI: Okay. I got it.

7           MR. HALF: It's an inhouse problem, not a --- I  
8 didn't want to say outhouse there.

9           REPRESENTATIVE SACCONI: And what station do you  
10 use, or what station do you use for your company in the  
11 Pittsburgh area?

12           MR. HALF: The way Star Transportation Group works,  
13 it has offices in Cranberry and on the South Side.

14           REPRESENTATIVE SACCONI: Okay.

15           MR. HALF: In Allegheny County. And in the South  
16 Side, there are a few CNG stations. We happen to have a  
17 primary relationship with the American Natural Station, which  
18 is in Station Square. An the first one that American Natural  
19 built in Pennsylvania, they're a New York based company, was in  
20 Station Square. And they came here to make it a diesel, CNG,  
21 gasoline multipurpose, and it has coffee as well. So those are  
22 the only necessities you need.

23           But the --- as a good example you mentioned fuel,  
24 and somebody mentioned portability before. When Sunoco was  
25 putting CNG stations out on the turnpike, I think it's in New

1 Stanton, and opened prior than in 2013. You're able to put  
2 compressed natural gas into mobile vehicles, trucks, and you're  
3 able to haul it around to refuel. So for instance, our taxi  
4 drivers were asked to participate in a testing cycle, where  
5 they were doing things out at New Stanton. And then they put  
6 it through like the truck, and then they took it to South Side,  
7 and then our taxis lined up to get free, tested, used because  
8 you can't resell to the public fuel.

9           My point is that you can have mobile CNG stations in  
10 a way to hearten rural areas. I'm not saying that's practical,  
11 but you could make the address --- what you had to look at some  
12 areas to give the range anxiety issue is private operators.  
13 UPS may have their own CNG. The public transit system may have  
14 their own CNG. You know, the maintenance could have the busses  
15 come back at night and fuel up. To look at the insurance  
16 issue, now you need a rider allowance or forgiveness or  
17 something. So private operator and private property where you  
18 have a regulated public taxi advance type vehicle or shuttle  
19 for the Senior Center or whatever like you talked about the CNG  
20 vehicle or the Community Center recently, that they can  
21 actually refuel and be at the UPS facility or somewhere at a  
22 private area.

23           But again, you know, occasionally lawyers are  
24 supposed to mitigate risk and that usually means no progress.  
25 And I think sometimes there's a way to sort of allow that to

1 sort of be a special case. So sorry for the sideline, but  
2 that's how it is.

3 REPRESENTATIVE SACCONI: That's all right. Final  
4 question for you is I really like leaving the statement saying  
5 --- this kind of progress, I'm all for it. But I'm looking at  
6 some of the pages. You know, one of them was kind of  
7 registration fees. I'm not sure that that's much of an  
8 incentive. Convince me that giving you an exemption or  
9 lowering the cost of registration fees, one of your ideas, is  
10 really an incentive for you.

11 MR. HALF: I don't think it fits the incentive for  
12 us.

13 REPRESENTATIVE SACCONI: Okay.

14 MR. HALF: I think the incentive for us would be  
15 from a business fleet owner. It's something that there's a  
16 rebate that could make a difference on the acquisition. But  
17 for the citizen, and I go back to something Mr. Stark said. If  
18 you don't take advantage --- and actually he talked about it on  
19 the beauty of even the river vessels, the riverboat. There's a  
20 lot of buzz in marketing that you could really have that could  
21 talk about, hey, you get a \$5 discount, you get a five percent  
22 or ten percent discount on the turnpike if you use a CNG  
23 vehicle.

24 It's not going to cost the Pennsylvania Turnpike  
25 anything for revenue. And there's not much that I even care

1 about as a consumer that's making me line up at the dealership  
2 for a CNG vehicle to save like ten percent. But it creates the  
3 impression that we care about it. And the more we care,  
4 eventually the culture says we like this idea, and it becomes  
5 more natural. I think that's what I'm speaking towards. That  
6 if a County Executive really wants to have CNG or green fuel or  
7 green energy around, then make sure you add that last sentence  
8 onto that exemption or a discount. If we're going to have the  
9 \$5 off, we're not adding on if it's a CNG or electric. It's  
10 not going to make a difference to the amount of revenue that's  
11 selected, but it gives the impression that green is important.

12 Remember I said, green is nice to have. The more we  
13 move nice to have into the front of our brain, it's really part  
14 of what we do everyday. We all accept recycling happening;  
15 right? You put your containers, your cardboard, your stuff  
16 separately. And that's a common thing. That's what I'm  
17 looking for. That's the simple step. It's not going to make a  
18 difference in budget.

19 REPRESENTATIVE SACCONI: Okay. Thank you. You guys  
20 do good work.

21 MR. HALF: Thank you.

22 SENATOR BARTOLOTTA: I'm in agreement several times  
23 on the things that you presented. So you have your vehicles  
24 there, and what you do is really remarkable for our Earth and  
25 the environment. Pennsylvania has about over 930,000 veterans

1 in Pennsylvania. Washington County I believe has probably got  
2 the highest population of veterans anywhere. So to afford a  
3 specific industry devoted to them and the families of them,  
4 too, I commend you for that alone. But I like your ideas of  
5 promoting CNG, getting people used to seeing the word again and  
6 again and again. Then it just becomes just a regular word and  
7 a regular thing that we're used to saying.

8 I grew up in California. I came here in '86. I  
9 mean, out there these things have been around for a very, very  
10 long time. So coming to Pennsylvania and trying to get used to  
11 something new, it takes a good bit of time and a lot of  
12 exposure. So I look forward to speaking with you again on some  
13 of your ideas as far as different legislation goes, some things  
14 we can do in the transportation and commission authority. So  
15 I'll be reaching out.

16 MR. HALF: Great. I look forward to it.

17 CHAIRMAN HUTCHINSON: Thank you. Thank you for your  
18 testimony. We are done. I want to thank everyone. We had  
19 some great information today from our fantastic testifiers,  
20 very knowledgeable people. I want to thank my colleagues for  
21 coming today and listening to this and learning, as I have very  
22 much today.

23 Also again, I want to thank Representative Saccone  
24 for hosting this, bringing us down here to Finleyville. It's a  
25 delightful and small community here. And I want to thank

1 everyone who participated today. This concludes our hearing,  
2 and this meeting is now adjourned.

3 \* \* \* \* \*

4 HEARING CONCLUDED

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