NATIONAL FUEL GAS DISTRIBUTION CORPORATION

PARTNERSHIP FOR NGV PROGRAM

REPORT TO THE NEW YORK STATE
PUBLIC SERVICE COMMISSION

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REPORTING PERIOD: January 1, 2014 – December 31, 2014

Prepared by
Erik M. Solomon
Energy Services Department
(716) 857-7003
solomone@natfuel.com

Table of Contents

National Fuel Gas Distribution Corporation
NGV Pilot Program - Report to the New York State PSC
Reporting period: January 1, 2014 to December 31, 2014

I. Background

On June 28, 2011, National Fuel Gas Distribution Corporation (National Fuel or the Company) filed a proposal with the NYPSC to allow the Company to promote the development of Natural Gas Vehicle (NGV) applications in its New York service territory by permitting the Company to buy down (reduce) the initial cost of installing NGV equipment at customer facilities and/or purchase of NGV's. On November 18, 2011, the NYSPC issued an Order (Case 11-G-0348) ("the 2011 Order"), approving the NGV Partnership Pilot Program.

On December 9, 2014 the Company filed revisions to P.S.C. No. 8 – Gas to extend its Partnership for Natural Gas Vehicle (NGV) Program to March 31, 2018. On May 15, 2015, the NYPSC issued an Order (Case 14-G-0551) ("the 2015 Order"), approving the NGV Partnership Pilot Program extension.

.This report is being filed in accordance with the 2011 Order and the 2015 Order.

II. Program Overview

A. Program Design

National Fuel's Partnership for NGV's program is designed to improve the customer's NGV project economics by reducing the payback requirements of the customer through a one-time cost buy down of the NGV Refueling Station facility installation and/or purchase of NGVs. The cost of the one-time facility cost buy down would be recovered from the customer through the future incremental transportation or sales service charges paid to Distribution by the customer. This method assures that buy down costs will be borne by the NGV customers on a project-by-project basis.

In accordance with the Order, the Company has implemented this program on a pilot basis over three-and-a-half years. The program originally had an annual buy down cap of $1,000,000 per year, for a total program cap of $3,500,000. The new order establishes a $3,000,000 cap for 3 years. National Fuel expects that typical buy down per customer will be in the range of $10,000 to $200,000. All participating customers must sign a performance contract with a term of up to six years and will be required to provide security to cover the Company's buy down amount.

B. Program Objectives and Benefits

The Partnership for NGV's program was developed in response to requests from customers and our NGV partners that were actively involved in the installation and operation of NGV facilities/vehicles for customers. Customers and our NGV partners urged National Fuel to become directly involved in improving the marketability of NGVs.

The objectives of the Partnership for NGVs program include the following:

1. Improve project economics to meet the customer's payback requirements.
2. Develop flexible rates designed to meet project requirements.
3. Provide one-time facilities cost buy down.
4. Develop a set of measurable deliverables to evaluate the effectiveness of the pilot program and report back to the Commission.
5. Costs to be borne entirely by each project.

Promoting the development of NGV's would benefit Distribution from the high load factor and incremental volumes generated by NGV customers. This type of increased load helps Distribution spread out system fixed costs over larger throughput, and improves utilization of the system during the off-peak shoulder and summer months. The overall system improvement then is beneficial for Distribution's rate payers.

For commercial and industrial customers, NGVs allow them to reduce their overall fuel costs, while enhancing our environment and national energy security. NGVs would promote the state's ongoing efforts to maintain and attract employers to New York through reduced operational business costs and increased competitive statuses.

The 2009 New York State Energy plan recognized New York's leadership role in developing NGVs. New York can work with other states and with transportation and energy associations to influence vehicle manufacturers to produce alternative fuel vehicles of all types (light duty and heavy duty). Having a variety of vehicle types to meet their needs will allow public and private sector fleets to expand their use of these vehicles.

C. Program Regulatory Reporting Requirements

The reporting requirements, found in Appendix II of both the 2011 Order and the 2015 Order, are:

1. Documentation and Verification of Project Economics
   National Fuel will collect data on refueling facility/vehicle costs, O&M costs, and displaced gasoline/diesel fuel costs to calculate the actual customer payback achieved. These actual costs will be compared to the estimated pro-forma costs, and the results will be used to further refine our analysis on future projects.

2. Evaluation of Performance and Impact of NGVs on the Environment.
   National Fuel will analyze the impact of the NGV project on reducing harmful emissions to the atmosphere.

3. Demonstration of the Reliability of NGVs
   National Fuel will monitor the performance of the NGV project to develop a profile of the operational aspects of NGV refueling stations and vehicles, as well as frequency of planned vs. unplanned maintenance. This will be used to develop a better understanding of NGV refueling stations and vehicle reliability, as well as provide testimonials for future customers questioning NGV reliability.

4. Development of NGV "Best Practices Guide"
   National Fuel will monitor the startup of the NGV refueling station and/or new vehicles to document the process and establish a "best practices" procedure guide. The results will be shared with customers and our NGV partners to improve the startup procedures for future installations.

5. Introduction of NGV's to Interested Parties
   National Fuel will introduce the NGV concept and associated technologies to design engineers, mechanical/electrical contractors, service companies, legislators, government agencies, etc. Educating these entities on the features and benefits of NGVs will further encourage the advancement of NGV's in western New York.

6. Measurement of Customer Acceptance and Awareness
   National Fuel will survey key personnel from each customer to determine customer satisfaction with the NGV project and identify areas of concern or weakness in the design, installation, and operation. This information will be used to improve future installations and increase the awareness of these issues for prospective customers.

7. Collection of Operating/Load Data
   National Fuel will collect data on project operating information such as number of vehicles fueled, miles vehicles driven, natural gas used, gasoline/diesel displaced, cost of natural gas and gasoline/diesel, etc.

D. NGV Market Overview

Natural gas has been used as a transportation fuel for decades. Although NGVs have become more popular over the past few years in our service territory, there are some obstacles to continuing this growth trend. The rapid decrease in prices of diesel and gasoline, combined with relatively consistent natural gas prices (Figure 1), has increased the payback period for natural gas vehicles. Despite the converging fuel prices, growing environmental concerns and the need to reduce our dependence on imported oil have caused our NGV market to increase, especially among large commercial fleets. National Fuel has seen several large customers convert large portions of their fleet to NGVs. Some of these customers include Modern Disposal, Waste Management, Try-IT Distributing, Guard Contracting, Innovative Transportation, New York State Office of Parks & Recreation, and Tops Markets. Due to these conversions, National Fuel has seen a dramatic increase in natural gas usage over the past few years. Figure 2 on the following page illustrates this continued growth.

FIGURE 1

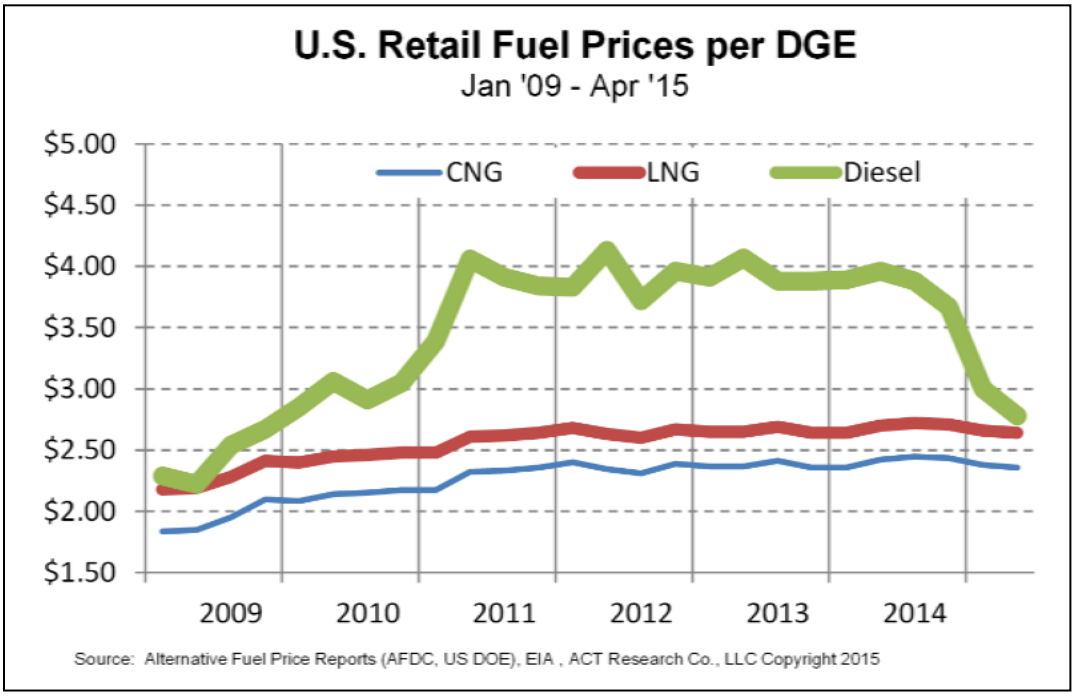
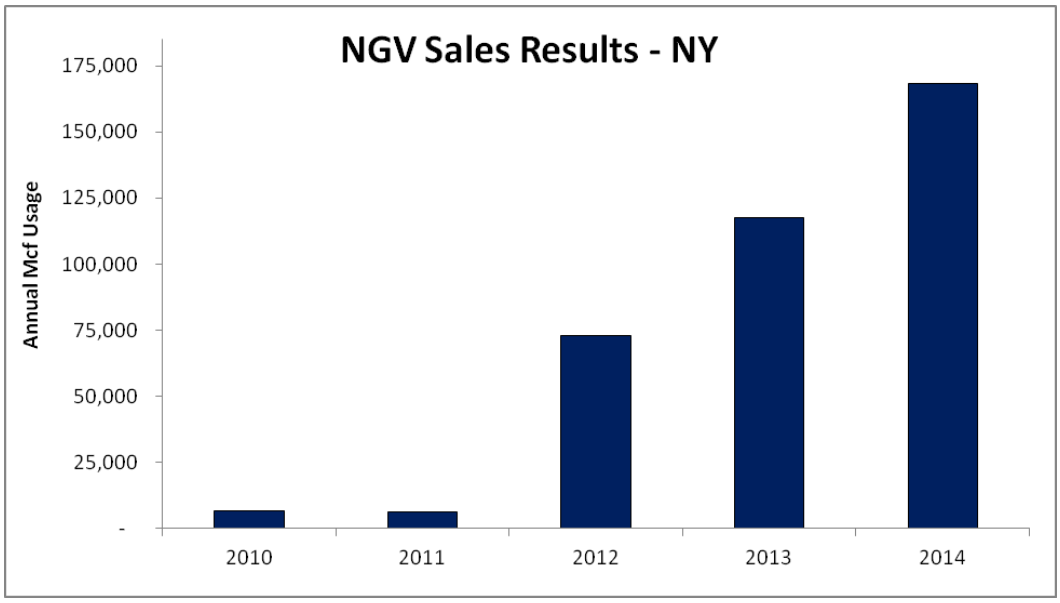


FIGURE 2

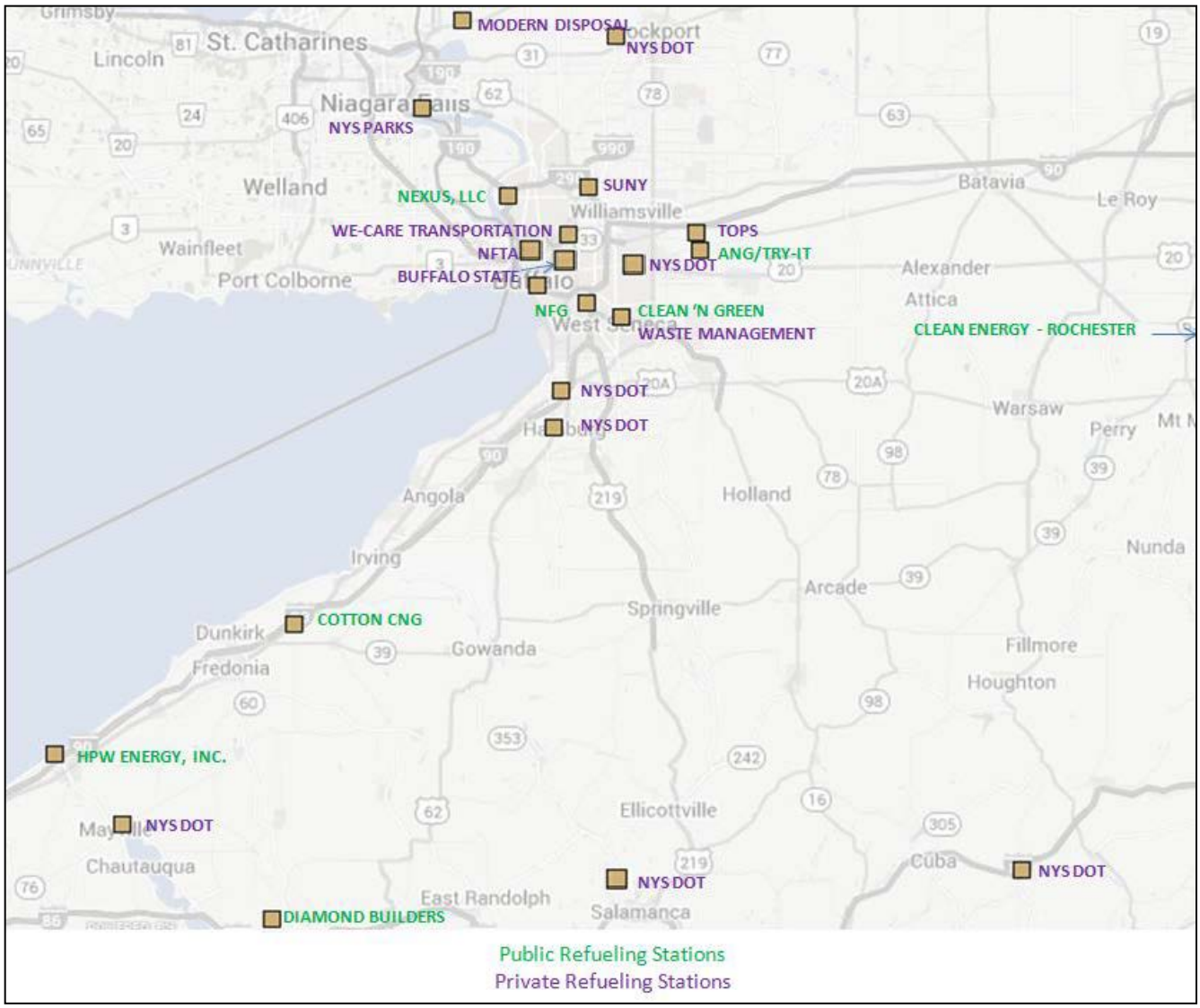


The market penetration of NGVs in our NY service territory has begun to make progress. Several NGV options are now more commonly available compared to past years. These include vehicle sizes from Light Duty to Medium Duty to Heavy Duty. The Light Duty vehicles include passenger cars, taxi cabs, pickup trucks, and service vans. The Medium Duty vehicles include short haul delivery trucks, transit buses, and shuttle buses. The Heavy Duty vehicles include transit buses, shuttle and school buses, tractor trailer trucks, and garbage trucks. However, all of these natural gas vehicles come with an added cost when compared to their gasoline or diesel counterparts. On top of the vehicle's purchase price, the Light Duty vehicles can cost an additional $7,000 to $14,000, Medium Duty vehicles an additional $15,000 to $20,000, and the Heavy Duty vehicles an additional $35,000. Even with these incremental costs, National Fuel continues to see that the economic and environmental impacts outweigh these costs for our customers.

As more vehicles enter the market, we are also now beginning to see NGV refueling stations being built to satisfy this market. There are two primary types of stations, time-fill and fast-fill. The time-fill station is recommended for private fleets with vehicles that return to a central location overnight. The refueling time usually take 6 to 8 hours, and these stations can cost between $100,000 and

$1,000,000. The fast-fill station is recommended for a public station. The refueling time is usually between 3 and 7 minutes, and these stations can cost $500,000 to $3,000,000. However, in addition to their time-fill station, some private fleets will add a fast fill station option.

National Fuel currently has eight public access stations and twelve private access stations in our service territory. The public access stations include National Fuel's West Seneca station on Mineral Springs Rd, Waste Management, HPW Energy, Cotton Well Drilling, Clean Energy, Try-It Distributing, Diamond Builders and NEXUS Natural Gas. The private access stations include Waste Management, Modern Disposal, NYS Office of Parks & Recreation, NYS Department of Transportation's six locations, SUNY at Buffalo, Buffalo State College and Tops Markets. The map on the next page illustrates the locations of these stations in western New York.


MODERN DISPOSAL
NYS DOT
NYS PARKS
SUNY
NEXUS, LLC
WE-CARE TRANSPORTATION
TOPS
NFTA
ANG/TRY-IT
NYS DOT
BUFFALO STATE
NFG
CLEAN 'N GREEN
WASTE MANAGEMENT
CLEAN ENERGY - ROCHESTER
NYS DOT
NYS DOT
COTTON CNG
HPW ENERGY, INC.
NYS DOT
NYS DOT
NYS DOT
DIAMOND BUILDERS
St. Catharines
Lincoln
Niagara Falls
Welland
Wainfleet
Port Colborne
Williamsville
Batavia
Le Roy
Alexander
Attica
Warsaw
Perry
Angola
Holland
Irving
Springville
Arcade
Nunda
Dunkirk
Fredonia
Gowanda
Fillmore
Houghton
Ellicottville
Chautauqua
Cuba
East Randolph
Salamanca
Public Refueling Stations
Private Refueling Stations

III. Program Results

A. Customer Participation

Customer and NGV Partners response to the Partnership for NGV Program continues to be positive and enthusiastic. Customers appreciate the funding and see National Fuel's direct involvement in promoting and demonstrating a firm commitment to the Natural Gas Vehicle (NGV) technology. NGV Partners value National Fuel's participation not only as a means of improving project economics, but also because it boosts the credibility of NGV technology as a long-term, reliable alternative to the customer's traditional transportation fuel, as well as increasing the customer's comfort level with NGV technology.

National Fuel's Energy Services Department administers the Pilot Program and has been promoting it as a tool to boost the economics of NGV projects. Energy Services conducts preliminary NGV feasibility assessments for its customers and incorporates the Pilot Program as an integral piece of its sales and marketing activities.

As of the release of this report, National Fuel had contracted with seven customers under the program, and one customer in final contract negotiations (NFTA).

Of the seven customers under contract, six of them are fully operational, with one (We Care) expected online in early 2016. For the purposes of this report, all six operational NGV customers are included, but only those four operational in 2014 have actual operating results in Section B and Appendix B. However, all six were surveyed and their survey results are included in Section G, Appendix C.

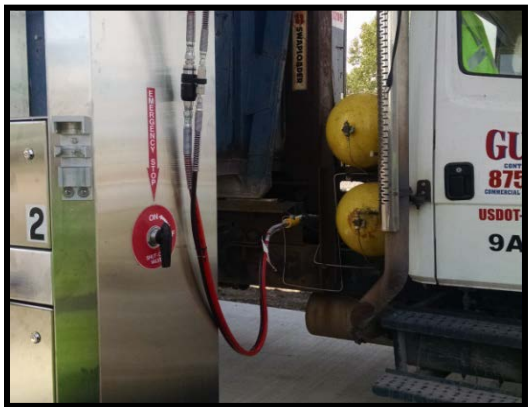
1. Innovative Transportation Services – A transportation affiliate to Sonwil Distribution, a logistics solutions firm located in West Seneca, New York. One tractor/trailer truck was purchased under the Pilot Program. Seven more trucks have been placed in service since inception. The Pilot funds assisted with a portion of the incremental cost of the NGV up-fitting. Shown below are two of the natural gas vehicles.


2. Modern Disposal – A company committed to the most innovative and responsible methods of materials management and recycling. Modern installed a private NGV refueling station, including 80 time fill spots and 1 fast fill dispenser located at their Model City, New York facility. They have converted 54 of their 228 trucks to CNG from diesel. Shown below is one of the CNG trucks and the refueling station.

3. Try-It Distributing – A beverage distributor located in Lancaster, NY. Try-It installed a public fast fill station comprising four pumps rated for 3,600 psi. Try-It converted their entire fleet, totaling 43 vehicles, to CNG. Shown below are the refueling station and several of their CNG trucks.

4. Waste Management – A waste collection and waste removal service provider for both business and residential needs. Waste Management (WM) installed a private time fill NGV refueling station and a public fast fill refueling station located at their West Seneca, New York facility. They have converted 42 of their 48 trucks to CNG from diesel. The remaining 6 diesel trucks and 10-15 diesel/gas support vehicles could convert if WM wins additional contracts. Shown below are the CNG trucks and the fast fill refueling station.

5. NEXUS Natural Gas- Comprised of a small group of seven businesses, NEXUS Natural Gas was formed to provide easy access to natural gas for commercial and personal vehicles. NEXUS installed a public fast fill refueling station comprised of four pumps in Buffalo, NY and members have converted 24 of their company vehicles to CNG. Shown below is the public fast fill refueling station. They came online in the summer of 2015.



6. Tops Markets, LLC- A leading full-service grocery retailer in upstate New York, northern Pennsylvania and western Vermont installed a private refueling station at their Lancaster, NY distribution center. They have converted all 55 of their diesel tractor/trailers to CNG. Shown below are the CNG trucks and private refueling station. They came online in the summer of 2015.

7. NFTA Metro- The local public transportation authority has decided to convert a part of their commuter bus and paratransit bus fleets to CNG. They will have a private filling station in Buffalo, NY. Below are pictures of the converted busses during a press release. Expected to open during calendar year 2016.

8. We Care- A transportation company that caters to medical and handicapped passengers. They are a part of the MASH network and have converted some of their fleet to CNG. They will have a private filling station in Buffalo, NY. Below are pictures of current diesel/gasoline vehicles. They are expected to open during calendar year 2016

At the time of this report, the six customers on line have a total of 207 converted trucks to CNG and installed two private time-fill refueling stations and three public fast-fill stations, which will result in an estimated 293,589 Mcf of annual incremental volume to National Fuel. The Company's total buy down for these customers was $975,596, representing 27.9% of the three-and-a-half year program cap of $3,500,000.

Appendix A, The Program Results Summary, lists more information on each participant above, including annual incremental volume and margin, the buy down amount and their NGV vehicles/refueling stations.

B. Documentation and Verification of Project Economics

Innovative Transportation Services

Appendix B compares Innovative Transportation Services Pro Forma Economics prior to the purchase of the dedicated CNG tractor and the Actual Customer Economics for 2014.

The Customer Pro Forma Economics showed an estimated simple payback before and after any grants of 0.8 years and 0.4 years respectively. The estimates assumed an incremental cost of $30,000 for purchasing one dedicated CNG vehicle and the cost savings associated with operating a CNG vehicle versus a diesel vehicle. Based on the customer's mileage estimates and assumed miles per gallon, National Fuel was able to assist the customer with calculating their equivalent natural gas usage. After calculating the estimated annual fuel cost using CNG versus diesel, the annual savings was estimated to be $35,449.

As shown in Appendix B, the Actual Customer Economics for 2014 showed Innovative Transportation saving $27,446 per vehicle and the simple payback tripling in duration. The simple payback change was due to a few different factors. One factor is the addition of 7 more CNG tractor trailers to Innovative's fleet. The increase in payback time is also due to the actual incremental cost of purchasing a dedicated CNG vehicle. The original estimate was for $30,000 but the actual cost was $90,000. Another contributing factor was the recently decreasing diesel fuel costs. As a result of these factors, the simple payback before and after incentives, changes to 3.3 years and 3.2 years respectively.

However, it is also important to note that Innovative Transportations "decision to transition their fleet toward natural gas is a component of their larger company-wide transportation strategy that focuses on continuous efficiency improvement, cost control, and operational and environmental sustainability."[1] The trucking and warehouse industry is demonstrating their respect for the environment and satisfying their customers sustainability requirements.

[1] Don Dimitroff, "Sonwil Distribution Center Enhances Transportation Fleet with CNG Trucks," Sonwil Corporate Website, January 2, 2014

Modern Disposal Services

Appendix B compares Modern Disposal Services Pro Forma Economics prior to the purchase of the dedicated CNG tractors and the installation of the NGV Refueling Station along with the Actual Customer Economics for 2014.

The Customer Pro Forma Economics showed an estimated simple payback before and after any grants of 3.6 years and 2.0 years respectively. The estimates assumed a total project cost of installing a NGV refueling station and an incremental cost for purchasing dedicated CNG vehicles. The estimate also considered the cost savings associated with operating the CNG vehicles versus the diesel vehicles. Based on the customer's mileage estimates and assumed miles per gallon along with their current diesel cost per gallon, National Fuel was able to assist the customer with calculating their equivalent natural gas usage. After calculating the estimated annual fuel cost using CNG versus diesel, the annual savings was estimated to be $20,576 per vehicle or $850,936 for the total fleet.

As shown in Appendix B, the Actual Customer Economics for 2014 showed Modern Disposal Services saving $27,411 per vehicle or $1,466,177 for the total fleet and the simple payback decreasing more than a year from the estimate. The simple payback change was due primarily to the addition of three vehicles and the actual cost of diesel per gallon. The original estimate was to purchase 45 vehicles and their total CNG fleet was 54 in 2014. This contributed the estimated annual fuel usage to be higher than expected. The original estimate assumed 351,000 equivalent diesel gallons per year and the actual equivalent diesel gallons per year were 519,480. In addition to the increase in the equivalent diesel gallons, the estimated price per diesel gallon was lower than the actual price. This resulted in their current diesel fuel cost being $2,083,115 versus the estimate of $1,316,250. As a result of these two factors, the simple payback before and after incentives, changes to 2.5 years and 1.5 years respectively.

Try-It Distributing

Appendix B compares Try-It Distributing Pro Forma Economics prior to the purchase of the dedicated CNG tractors and the installation of the NGV Refueling Station along with the Actual Customer Economics for 2014.

The Customer Pro Forma Economics showed an estimated simple payback before and after any grants of 6.7 years and 4.1 years respectively. The estimates assumed a total project cost of installing a NGV refueling station and an incremental cost for purchasing dedicated CNG vehicles. The estimate also considered the cost savings associated with operating the CNG vehicles versus the diesel vehicles. Based on the customer's mileage estimates and assumed miles per gallon along with their current diesel cost per gallon, National Fuel was able to assist the customer with calculating their equivalent natural gas usage. After calculating the estimated annual fuel cost using CNG versus diesel, the annual savings was estimated to be $8,002 per vehicle or $419,081 for the total fleet.

As shown in Appendix B, the Actual Customer Economics for 2014 showed Try-It Distributing saving $7,381 per vehicle or $242,394 for the total fleet and the simple payback estimate increased several years from the original estimate. The simple payback change was due to several factors. The original estimate assumed the incremental cost of a dedicated CNG vehicle was $30,000 but the actual cost was $35,000. The total CNG fleet cost was originally estimated to be $1,290,000. The actual incremental cost of the CNG fleet was $1,505,000. The annual savings was originally expected to be $419,081 for the entire fleet and now the estimate has been lowered to $242,394 per year. As a result of these factors, the simple payback before and after incentives, changes to 12.4 years and 7.9 years respectively.

However, it is also important to note that Try-It's commitment to using CNG demonstrates their continued promotion of alternative energy infrastructure and energy independence. Although the economics showed a payback, the economics was not the deciding factor. Try-It is excited about the significant environmental benefits associated with reducing their greenhouse gas emissions and valuing their customer's commitment to sustainability.

Waste Management

Appendix B compares Waste Management's Pro Forma Economics prior to the purchase of the dedicated CNG tractors and the installation of the NGV Refueling Station along with the Actual Customer Economics for 2014.

The Customer Pro Forma Economics showed an estimated simple payback before and after any grants of 3.6 years and 3.4 years respectively. The estimates assumed a total project cost of installing a NGV refueling station and an incremental cost for purchasing dedicated CNG vehicles. The estimate also considered the cost savings associated with operating the CNG vehicles versus the diesel vehicles. Based on the customer's mileage estimates and assumed miles per gallon along with their current diesel cost per gallon, National Fuel was able to assist the customer with calculating their equivalent natural gas usage. After calculating the estimated annual fuel cost using CNG versus diesel, the annual savings was estimated to be $24,330 per vehicle or $950,528 for the total fleet.

As shown in Appendix B, the Actual Customer Economics for 2014 showed Waste Management saving $25,413 per vehicle or $1,067,339 for the total fleet and the simple payback increasing a few months from the estimate. The simple payback change was due primarily to the actual incremental cost of the dedicated CNG vehicles being higher than the estimate. The original estimate assumed the incremental cost of a dedicated CNG vehicle was $22,500 but the actual cost was $30,000. The total CNG fleet incremental cost was originally estimated to be $990,000. The actual incremental cost of the CNG fleet was $1,260,000. As a result of this incremental cost, the simple payback before and after incentives, changes to 3.4 years and 3.3 years respectively.

NEXUS Natural Gas

Appendix B explains NEXUS Natural Gas's Pro Forma Economics prior to the purchase of the dedicated CNG tractors and the installation of the NGV Refueling Station. There is no actual data due to coming online in 2015.

The Customer Pro Forma Economics showed an estimated simple payback before and after any grants of 12.8 years and 8 years, respectively. The estimates assumed a total project cost of installing a NGV refueling station at $2,000,000 and an incremental cost for purchasing dedicated CNG vehicles of $45,000. The estimate also considered the cost savings associated with operating the CNG vehicles versus the diesel vehicles. Based on the customer's mileage estimates and assumed miles per gallon along with their current diesel cost per gallon, National Fuel was able to assist the customer with calculating their equivalent natural gas usage. After calculating the estimated annual fuel cost using CNG versus diesel, the annual savings was estimated to be $9,405 per vehicle or $240,818 for the total fleet.

Tops Markets, LLC

Appendix B explains Tops Markets, LLC Pro Forma Economics prior to the purchase of the dedicated CNG tractors and the installation of the NGV Refueling Station. There is no actual data due to coming online in 2015.

The Customer Pro Forma Economics showed an estimated simple payback before and after any grants of 0.9 years and 0.8 years respectively. The estimates assumed a total project cost of installing a NGV refueling station at $2,000,000 and an incremental cost for purchasing dedicated CNG vehicles of $30,000 per vehicle. The estimate also considered the cost savings associated with operating the CNG vehicles versus the diesel vehicles. Based on the customer's mileage estimates and assumed miles per gallon along with their current diesel cost per gallon, National Fuel was able to assist the customer with calculating their equivalent natural gas usage. After calculating the estimated annual fuel cost using CNG versus diesel, the annual savings was estimated to be $68,724 per vehicle or $3,879,811 for the total fleet.

C. Evaluation of Performance and Impact of NGV's on the Environment

According to the U.S. Department of Energy website, "Natural gas burns cleaner than conventional gasoline or diesel due to its lower carbon content. When used as a vehicle fuel, it can offer life cycle greenhouse gas (GHG) emissions benefits over conventional fuels, depending on vehicle type, drive cycle, and engine calibration. In addition, using natural gas may reduce some types of tailpipe emissions."[2]

In fact, according to the NGVAmerica website, "medium and heavy duty natural gas engines were the first engines to satisfy U.S. Environmental Protection Agency's (EPA) demanding 2010 emission standards for nitrogen oxides (NOx).[3] Many sources suggest that heavy duty vehicles using CNG instead of Diesel produce 70-90% less Carbon Monoxide (CO), 50-75% less non-methane organic gas (NMOG), 75-95% less Nitrogen Oxides (NOx), 20-30% less Carbon Dioxide (CO_2) once consumed, while also producing 50% less noise than a diesel engine. With these numbers, converting just one refuse truck from diesel to natural gas reduces as much pollution as taking 325 cars off the road.[4]

The table below shows CO_2 pounds per gallon equivalent for Diesel and CNG.

Diesel CO_2 Emission	
CO_2 Emission(lbs/gallon)	22.40

Compressed Natural Gas (CNG) CO_2 Emission	
CO_2 Emission(lbs/gallon)	14.63

[2] U.S. Department of Energy, Energy Efficiency & Renewable Energy, Alternate Fuels Data Center

[3] § NGVAmerica, NGV's and the Environment, www.ngvc.org/about_ngv/ngv_environ.html

[4] NGV America NGV's and the Environment, www.ngvc.org/about_ngv/ngv_environ.html

The following section details the environmental impact that Pilot Program customers were responsible for during the 2014 calendar year.

Innovative Transportation Services

The customer converted 8 trucks to CNG. Each truck used 10,000 gallons of diesel per year. This conversion resulted in a displacement of 80,000 gallons of diesel in 2014, and 112,000 gallons overall. After applying the factor in the table above, the customer was emitting about 1,792,000 pounds of CO_2. After converting to CNG, the customer emits 1,170,400 pounds of CO_2. By converting to CNG, the customer experienced 621,600 pounds of CO_2 reduction in 2014. Total CO_2 reduction for the program thus far amounts to 870,240 pounds.

Modern Disposal Services

The customer converted 54 trucks to CNG. Each truck used 7,800 gallons of diesel per year. This conversion resulted in a displacement of 421,200 gallons of diesel in 2014 and 795,600 gallons overall. After applying the factor in the table above, the customer was emitting about 9,434,880 pounds of CO_2. After converting to CNG, the customer emits 6,162,156 pounds of CO_2. By converting to CNG, the customer experienced 3,272,724 pounds of CO_2 reduction. Total CO_2 reduction for the program thus far amounts to 6,181,812 pounds.

Try-It Distributing

The customer converted 43 trucks to CNG. Each truck used 3,000 gallons of diesel per year. This conversion resulted in a displacement of 129,000 gallons of diesel in 2014 and 258,000 gallons overall. After applying the factor in the table above, the customer was emitting about 2,889,600 pounds of CO_2. After converting to CNG, the customer emits 1,887,270 pounds of CO_2. By converting to CNG, the customer experienced 1,002,330 pounds of CO_2 reduction. Total CO_2 reduction for the program thus far amounts to 2,004,660 pounds.

Waste Management

The customer converted 42 trucks to CNG. Each truck used 7,680 gallons of diesel per year. This conversion resulted in a displacement of 322,560 gallons of diesel in 2014 and 645,120 gallons overall. After applying the

factor in the table above, the customer was emitting about 7,225,344 pounds of CO_2. After converting to CNG, the customer emits 4,719,053 pounds of CO_2. By converting to CNG, the customer experienced 2,506,291 pounds of CO_2 reduction. Total CO_2 reduction for the program thus far amounts to 5,012,582 pounds.

In summary, these four customers have converted a total of 147 trucks to CNG. These four customers would have used 952,760 gallons of diesel in 2014, which equates to 21,341,824 pounds of CO_2 emitted. After converting to CNG, these same customers will emit only 13,938,879 pounds of CO_2. This is a decrease of 7,402,945 or 35% reduction in CO_2 for the 2014 calendar year. Overall CO_2 reductions for the project amount to 14,069,294 pounds. During the 2015 calendar year, we will see these numbers rise drastically as the environmental effects from several new NGV Pilot Program participants which were listed in Section A will be reflected.

D. Demonstration of the Reliability of NGV's

As the surveys indicate, all of the six participants encountered varying degrees of problems with their refueling station and/or their CNG vehicles.

Innovative Transportation Services

With the initially purchased truck, the customer experienced a gravy-like liquid coming out of the fuel filter. It was assumed to be oil leaking through the compressor into the natural gas. This problem caused the customer to replace oil filters at a more frequent rate than expected. Since the addition of the seven new trucks, there have been additional maintenance issues. The CNG trucks seem to run less efficiently in the winter than in summer and the customer needs to refuel more often as a result. During the winter the customer also determined that it was necessary to allow the trucks to warm-up for thirty minutes before driving, as opposed to only fifteen minutes of warm-up time for their diesel trucks. These problems seem to surface more frequently when the temperature falls below twenty-five degrees Fahrenheit. The customer also expressed that maintenance costs are an average of three times higher for their CNG vehicles. This is due to a combination of more maintenance issues for their CNG trucks, parts and labor being more expensive and the downtime being significantly longer due to availability of parts.

Modern Disposal Services

The customer currently has two compressors. If one compressor has maintenance issues, this can create a refueling issue for their fleet. Fortunately, the compressors have worked flawlessly. The customer has ordered a third compressor to provide redundancy for any maintenance concerns that may arise. However, the CNG vehicles have experienced a fair amount of problems with electronic sensors, cracked exhaust manifolds, piston heads and turbos. The customer has worked with the manufacturer to resolve these issues.

Try-It Distributing

The customer has a ten year lease agreement with a third party to build/own/operate/maintain the refueling station. To date, the station has operated very well. The customer is pleased with the quality of gas coming through and the station has never gone down since it went into operation.

The CNG vehicles have provided the most issues, but many of them have been resolved. The CNG trucks had some problems in the cold weather. The engine air intakes would experience ice crystallization. This would

cause the CNG vehicles to partially operate. The problem was addressed by placing a cover on the front grill of the truck to minimize crystallization and the trucks are now operating much more efficiently in the winter. The customer also stated that when the temperature drops below 20 degrees, the trucks need to be warmed up for about twenty minutes, which is longer than their diesel trucks.

Waste Management

The customer has experienced frozen nozzles at truck dispensers during cold weather. The CNG trucks also experience operational problems during extreme cold and extreme temperature swings. The customer warms up the trucks for about thirty minutes to address this issue and have also utilized front grill covers during the winter to solve the problem. The refueling station also experienced minor oil leaks, frequent valve changes and contaminated oil in the gas compressor at times, but after installing a dryer they were able to get rid of the moisture issues. There have been issues with the Cummins engines malfunctioning as well. It takes approximately 5 days for Cummins to rebuild the engine and get the truck back on the road. The customer has been changing the spark plugs more often and seeing more problems with the sensors, resulting in them being changed more frequently as well. The trucks are not getting the mileage that Waste Management would like and they have had to add an extra fuel tank on to their original plan for each truck. On a positive note, the oil replacement interval has been lengthened due to the clean burning natural gas versus the diesel fuel.

NEXUS Natural Gas

The customer has experienced no problems with their CNG vehicles thus far.

Tops Markets, LLC

Tops has a 6.5 year lease with Ryder for the CNG trucks. There have been a few issues with the trucks, but they were cleared up during the testing phase. Currently, Tops only has 8 vehicles in service and they have been working well. More detailed information will be provided once the customer has all 55 trucks in service.

E. Development of NGV "Best Practices Guide"

Appendix C, The Customer Satisfaction Survey, contains the results of the interviews with key personnel at the six NGV program installations. This information was used to monitor and document the design, installation, operation and utility support phases for these projects. See Section G of this report for a detailed discussion of the results of these surveys.

As the surveys indicate, all of the six participants encountered varying degrees of problems during the design, installation, purchase/conversion and start-up/operation phases of their NGV projects.

Design of NGV station: problems consist of cold weather consideration (pressure variations), natural gas dryer capacity and design, defueling post layout and fill post metering. Most of these issues took place during the first installation. Since then, the installations have made appropriate design changes.

In regards to potential problems regarding the gas quality, Energy Services should reinforce to prospective station operators that their design team should be requesting localized gas composition data from National Fuel in order to ensure the station is properly designed to operate as intended. Assumptions that our system supply aligns with the interstate pipeline standard of 7 lbs. of water vapor content is not a safe presumption. Parts of our system at certain times of the year may run higher than that amount.

Installation of NGV station: problems included some startup issues such as moisture in the fuel/fuel filters and the credit card readers at the point of sale machines. These issues were corrected quickly. The customers felt the installations were built well and on time. However, the customers recommend that local personnel are actively involved in the planning and construction process.

Purchase/conversion of CNG vehicles: problems included some delays in the receipt of the vehicles. The delays ranged from one month to seven months. Some other problems included the sizing of the fuel tanks and the reluctance from the vehicle drivers. The customers agreed on the importance of sizing the fuel tank correctly. Based on the ambient temperature outside, the

mileage can be significantly impacted. This should be accounted for in the cold weather climates.

Start-up and operation of NGV station and vehicles: problems with the NGV stations included minor oil leaks, valve changes, oil in the gas compressor and frozen nozzles during extreme cold. The vehicles experienced a fair amount of problems. The problems ranged from water/temperature sensors, exhaust manifolds, piston heads, turbos, oil like substance in filters and extreme cold weather disruptions. These problems have been addressed by the NGV station installers and the engine manufacturers. These problems have been resolved.

These problems are not surprising given the complex engineering required to design and install a CNG system, and the inherent problems that can arise in commissioning any intricate mechanical and electrical system.

While improvements are under way, these surveys show that NGV remains a viable technology for suitable applications. Most of these projects encountered few or no problems during their respective design, installation, purchase/conversion of vehicles and start-up process.

Based on the these results of all the customer surveys over the last year, National Fuel has started to develop a Best Practices Guide to share with future prospective NGV customers and contractors. The Guide can be found in Appendix D of this report.

F. Introduction of NGV's to Interested Parties

Most of the program participants have allowed potential NGV customers to visit their installations. Nothing can replace seeing a NGV installation in person and having the ability to talk to the operating personnel to answer questions on any problems or concerns the customer may have.

National Fuel completed the installation of an upgraded NGV refueling station at its Mineral Springs Service Station (MSW) in West Seneca, NY. The MSW refueling station footprint was upgraded to accommodate the increased tractor trailer customers. The MSW refueling station upgraded its existing compressor capacity from 262 scfm @ 3,000 psi to 470 scfm @ 4,600 psi. This allows our customer to receive a full tank of fuel when refueling. The storage capacity and standard flow rates were increased to expedite the refueling time. The MSW standard flow rates were increased from 2 gallons gas equivalent (GGE) per minute to two separate flow rate pumps, 4.5 gge per minute and 7.5 GGE per minute respectively. The refueling station was upgraded with a new credit card reader accepting Discover, VISA, WEX and MasterCard to help to accommodate diverse customers refueling at MSW.

Over the past few years, National Fuel has been involved in several outreach and education initiatives.

- Energy Services developed a new NGV sales and marketing brochure to assist with sales calls and training sessions.
- We have also developed a section of our corporate website dedicated to the education of natural gas vehicles. This also includes a map of current WNY CNG refueling stations open to the public.
- Energy Services has taken a lead role in a local advocacy organization, Clean Communities of WNY (CCWNY), as a member of the steering committee.
- We developed and participated in numerous events, including 2013 & 2014 Buffalo Auto Show, CNG 101 training workshops, customer Open Houses and tours of existing refueling stations, all of which helped promote the economic and environmental benefit of converting to natural gas vehicles.
- Energy Services has been able to develop relationships with consultants, equipment vendors, suppliers, contractors, trade groups and funding agencies. These resources have proven to be invaluable when developing this NGV market.
- Energy Services has worked with NEXUS and Tops Markets to enhance their station Grand Openings to increased turnout and outreach of events.

G. Measurement of Customer Acceptance and Awareness

The results of interviews conducted with all four participants are found in Appendix C, The Customer Satisfaction Surveys. To assist in the narrative below, the following ratings key from the survey can be used:

Rating
1 – Very Good
2 – Good
3 – Fair
4 – Poor
5 – Very Poor

Innovative Transportation Services

Innovative Transportation Services gave a **N/A** rating to the design and installation of the NGV Station phase of the project. They use public refueling stations.

The purchase/conversion of CNG vehicles phase received a **Good** rating. The engine manufacturer and tank supplier delays resulted in the CNG trucks being commissioned one to two months later than expected for the first truck. The supplier worked very closely with the customer and truck provider. The next round of trucks was delayed six to seven months.

The NGV Operation and Maintenance phase received a **Fair** rating, as the engine manufacturer told the customer they weren't changing their oil filters enough which resulted in a thick liquid accumulating on the filters. The customer believes that oil was leaking through the refueling compressor into the natural gas causing this substance build-up. During the winter the trucks also need to be warmed up for thirty minutes and maintenance problems increase during the winter months. The customer believes this is due to the cold weather and most issues increase when the temperature has dropped below 25° Fahrenheit.

National Fuel received a **Good** rating for providing adequate gas infrastructure support. The customer was originally unable to get a full tank at NFG's Mineral Spring refueling station due to the 3,000 psi dispenser limitation. Another obstacle for the customer was the inability of the refueling station to handle a full tractor/trailer due to the station's narrow lanes. The customer needed to leave the trailer back at their distribution center and pick up the trailer after

refueling. National Fuel has since upgraded their refueling station and the customer can now get a full tank as well as bring both the tractor and trailer to the station.

National Fuel received a **Very Good** rating for providing adequate financial incentive support. The customer was introduced to the NGV technology by National Fuel. The customer was advised on the potential fuel saving, payback scenarios, and environmental benefits.

The Economics cannot be rated at this time. The customer is evaluating the incremental cost of the vehicles, fuel saving, actual miles driven, and O&M costs.

Overall, Innovative Transportation Services gave the project a **Good** rating. They are still evaluating the economic savings but the projected payback appears to be slightly longer than their initial expectations. However, the main factor that makes this project favorable to them is the environmental benefits. They have incorporated this energy saving measure in their "green" marketing initiative.

The Future NGV Plans category received a **Fair** rating. The customer stated that if they had to purchase another trailer at the present time, it would be diesel due to the lowering diesel prices. However, if diesel prices went up and made their payback feasible, they would still consider CNG.

Appendix E contains a recent press release from their corporate website on the commitment to clean vehicle technology.

<u>Modern Disposal Services</u>
Modern Disposal Services gave a **Very Good** rating to the design phase of the NGV Refueling Station project. The refueling station was designed by Vocational Energy. The design met all of their expectations and needs.

The installation phase of the NGV refueling station received a **Very Good** rating. Vocational Energy acted as the General Contractor and subcontracted out various elements of the construction. The station was built and commissioned on time.

The purchase/conversion of CNG vehicles phase received a **Good** rating.

Modern purchased all 54 trucks from McNeilus, who was the up-fitter, responsible for adding the CNG tank, fuel lines, etc. to the Peterbilt trucks. They received trucks on time with only slight delivery delays.

The NGV Operation and Maintenance phase received a **Good** rating on the refueling station. Modern has had no problems with the time fill station. The NGV Operation and Maintenance phase received a **Fair** rating on the CNG trucks. Modern has experienced electronics problems with the engine water/temperature sensor, some cracked exhaust manifolds, problems with piston heads, and turbos. They have dealt with the manufacturer to resolve these issues.

National Fuel received a **Very Good** rating for providing adequate infrastructure and financial incentive support for the NGV project.

The NGV economics received a **Very Good** rating because the customer has experienced strong fuel cost savings with CNG. Modern expected the CNG trucks to be 5-10% less fuel efficient than diesel trucks. They found the fuel efficiency is closer to 25% less efficient. However, the fuel cost savings is more than offsetting the vehicle up charge and efficiency differential.

Overall, the customer gave the project a **Very Good** rating because the refueling station is working flawlessly and the vehicles have generated a strong fuel savings. The CNG trucks also run quieter and do not have a strong odor like that of diesel trucks.

The Future NGV Plans category received a **Very Good** rating. Modern is interested in investigating portable CNG refueling capabilities for their CNG fleet.

Try-It Distributing

Try-It Distributing gave a **Very Good** rating to the design phase of the NGV Refueling Station project. The refueling station was designed by American Natural Gas (ANG). Try-It is very satisfied with the station design.

The installation phase of the NGV refueling station received a **Good** rating. Try-It had some issues with the credit card reader and some moisture in the fuel/fuel filters. Besides these initial minor issues which have been resolved, the installation went smoothly.

The purchase/conversion of CNG vehicles phase received a **Very Good** rating. Try-It leased all 43 trucks, which were up-fitted by Kenworth, through Bank of America for eight years. A $1 million grant from NYSERDA was applied as a down payment on the lease to lower the monthly lease payment.

The NGV Operation and Maintenance phase received a **Very Good** rating on the refueling station. Try-It has a ten year lease agreement with ANG to build/own/operate/maintain the station. The station has operated very well. The NGV Operation and Maintenance phase received a **Good** rating on the CNG trucks. Due to a very cold winter, the CNG trucks experienced some operational issues and lower miles per gallon as a result, but by installing a cover on the front grill, the customer estimated that 95% of issues have been resolved. Try-It expected to be within 5-10% of the old diesel truck mileage of 5-6 mpg, but they are only getting 4.27 mpg with the CNG trucks. The customer also stated that the CNG trucks are more powerful than diesel with better pickup and acceleration, while also being much quieter than their diesel counterparts.

National Fuel received a **Very Good** rating for providing adequate infrastructure and financial incentive support for the NGV project.

The NGV economics received a **Very Good** rating because the customer expects to experience strong fuel cost savings with CNG. For the active fleet of 43 trucks, they expect to save $242,394 per year in fuel savings.

Overall, the customer gave the project a **Good** rating because the refueling station works flawlessly. The positive environmental impact of their trucks have helped successfully market their company to clients who are environmentally conscious.

The Future NGV Plans category received a **Fair** rating. Try-It was considering an additional NGV option for their 33 Ford Transit Connect vans, but they decided to purchase diesel trucks because the fuel prices have dropped significantly. However, they will be monitoring the economics and reliability of their current CNG fleet as well as the future diesel prices when purchasing new vehicles in the future.

Waste Management

Waste Management (WM) gave a **Fair** rating to the design phase of the Inside Private NGV Refueling Station project. This station was one of WM's first cold weather stations. The design was all time-fill and didn't include a fast fill option. The defueling post, which is used to remove CNG from tank for maintenance, had a poor design. Finally, the design did not include individual metering of each fill post. Waste Management (WM) gave a **Good** rating to the design phase of the Outside Public NGV Refueling Station project. The overall design met their expectations. The only drawbacks are pump speed and limited space for larger vehicles.

The installation phase of the NGV refueling station received a **Good** rating. The station was built and commissioned on time. However, WM personnel weren't involved in the construction planning process as much as they would have liked.

The purchase/conversion of CNG vehicles phase received a **Good** rating. WM experienced some delays in receipt of vehicles. The first 25 vehicles were delayed by one to two months. The original CNG tanks were not sized adequately to meet their daily routes. WM also experienced some minor apprehension/resistance from a few drivers, but this has gone away with time and the driver's are enjoying the newer CNG vehicles.

The NGV Operation and Maintenance phase received a **Fair** rating on the refueling station. WM had frozen nozzles at the truck dispensers. This was a big problem during the first winter. They also experienced minor oil leaks, valve changes, and contaminated oil in the gas compressor. After installing a dryer, the issues with the wet gas have subsided. There was also an issue with the credit card reader where there was a $50 purchase limit and larger fleet customers were not happy that they could not fill up in one transaction. The NGV Operation and Maintenance phase received a **Fair** rating on the CNG trucks. WM has experienced occasional operational issues caused by poor exhaust vent design. They also had occasional engine problems during cold weather and extreme temperature swings. This has gotten better with the addition of the front grill covers and warming up the vehicles for about thirty minutes in the winter. The customer has been seeing some issues with the Cummins engines. Though Cummins has been very responsive and cooperative, rebuilding an engine leaves a truck out of commission for about 5 days. On the positive side, WM has changed oil replacement intervals from 400 hours for diesel to 1,200 hours for CNG.

National Fuel received a **Very Good** rating for providing adequate

infrastructure and financial incentive support for the NGV project.

The NGV economics received a **Very Good** rating because the customer has experience strong fuel cost savings with CNG. Based on their latest analysis, the fuel savings is $1,067,339 including tax credits. Considering the incremental cost of the trucks, the fuel savings more than offsets this cost.

Overall, the customer gave the project a **Good** rating. WM was disappointed in the engines and the support from the manufacturer. Fortunately, WM bought a 5 year extended warranty package from the manufacturer. Mileage for the CNG vehicles is also not exactly where they would like it. Ultimately, the fuel savings have outweighed the problems encountered along the way.

The Future NGV Plans category received a **Very Good** rating.
WM has plans to replace the remaining 6 diesel trucks with CNG.

*The following surveys are from the time of the report release.

<u>NEXUS Natural Gas</u>
NEXUS Natural Gas gave a **Good** rating to the design phase of the NGV Refueling Station project. The refueling station was designed by JHA Associates. The design met all of their expectations and needs, once modifications to widen the exit for tractor trailers were made.

The installation phase of the NGV refueling station received a **Very Good** rating. Lane Construction acted as the General Contractor and was great to work with. The station was built and commissioned on time.

The purchase/conversion of CNG vehicles phase received a **Very Good** rating. NEXUS partners purchased trucks from several different manufacturers. They received trucks on time with no delivery delays.

The NGV Operation and Maintenance phase received a **Neutral** rating on the refueling station. NEXUS has had problems with the fast-fill station. Dispensers are not letting tanks get to full pressure and they have also had issues with the credit card reader interface. The NGV Operation and Maintenance phase received a **Very Good** rating on the CNG trucks.

National Fuel received a **Very Good** rating for providing adequate infrastructure and financial incentive support for the NGV project.

The NGV economics received a **N/A** rating at this time due to the infancy of the conversion project.

Overall, the customer gave the project a **Good** rating. The refueling station has had some issues, but the vehicles have generated strong fuel savings and have been running very smoothly. The CNG trucks also run quieter and give off less smell than the diesel trucks.

The Future NGV Plans category received a **Very Good** rating. NEXUS partners have 6 more trucks on order now, and will likely order additional trucks in the future.

Tops Markets, LLC

Tops gave a **Very Good** rating to the design phase of the NGV Refueling Station project. The refueling station was designed by Wendel. The design met all of their expectations and needs.

The installation phase of the NGV refueling station received a **Very Good** rating. American Natural Gas acted as the General Contractor for construction. The station was built and commissioned with very little delay.

The purchase/conversion of CNG vehicles phase received a **Good** rating. Tops leased all 55 trucks from Ryder for 6.5 years, who was the upfitter, responsible for adding the CNG tank, fuel lines, etc. to the trucks with Cummins engines. They received trucks with several months delay due to the length of time needed to install custom tank package.

The NGV Operation and Maintenance phase received a **Very Good** rating on the refueling station. Tops has had no problems with the fast fill station. The NGV Operation and Maintenance phase received a **Good** rating on the CNG trucks. There were a few small issues, that were easily resolved, but they have not put their trucks into full service yet.

National Fuel received a **Very Good** rating for providing adequate infrastructure and financial incentive support for the NGV project. Tops stated that National Fuel has been a great partner and the pilot program incentive provided really influenced their final decision to convert to CNG.

The NGV economics received a **Very Good** rating because the customer expects to receive almost initial payback on their investment even though the savings are not as strong with lower diesel prices.

Overall, the customer gave the project a **Very Good** rating because the refueling station is working flawlessly and the vehicles are expected to generate a strong fuel savings with an immediate payback.

The Future NGV Plans category received a **Very Good** rating. If Tops needed to purchase another tractor, it would be CNG based on current economics.

Overall, National Fuel is very encouraged by the positive response to our support of the customer's NGV projects, and especially the value the NGV pilot funding brought to the table.

H. Collection of Operating/Load Data

Innovative Transportation Services

The customer has 8 vehicles in their fleet. Each vehicle travels about 40,000 miles annually and uses about 1,589 Mcf of natural gas per year. The customer consumes 11,429 Mcf of natural gas for their entire CNG fleet which displaces about 91,429 gallons of diesel per year. The customer's diesel price was $4.01 per gallon. Based on the current natural gas cost of $11.50 per Mcf, the customer is saving about $2.40 per diesel gallon equivalent. This provides an annual fuel savings of $27,446 per year for each vehicle and $146,149 for the entire fleet. Overall fuel savings for the customer is $234,117.

Modern Disposal Services

The customer has 54 vehicles in their fleet. Each vehicle uses about 1,084 Mcf of natural gas per year. The customer consumes 48,789 Mcf of natural gas for their entire CNG fleet which displaces about 421,200 gallons of diesel per year. The customer's diesel price was $4.01 per gallon. Based on the current natural gas cost of $7.50 per Mcf, the customer is saving about $2.97 per diesel gallon equivalent. This provides an annual fuel savings of $23,146 per year for each vehicle and $1,174,908 for the entire fleet. Overall fuel savings for the customer is $2,282,172.

Try-It Distributing

The customer has 43 vehicles in their fleet. Each vehicle travels about 14,000 miles annually and uses about 414 Mcf of natural gas per year. The customer consumes 17,804 Mcf of natural gas for their entire CNG fleet which displaces about 128,085 gallons of diesel per year. The customer's diesel price was $4.01 per gallon. Based on the current natural gas cost of $11.00 per Mcf, the customer is saving about $2.48 per diesel gallon equivalent. This provides an annual fuel savings of $7,381 per year for each vehicle and $242,394 for the entire fleet. Overall fuel savings for the customer is $493,428.

Waste Management

The customer has 42 vehicles in their fleet. Each vehicle uses about 1,207 Mcf of natural gas per year. The customer consumes 50,687 Mcf of natural gas for their entire CNG fleet which displaces about 364,653 gallons of diesel per year. The customer's diesel price was $4.01 per gallon. Based on the current natural gas cost of $7.77 per Mcf, the customer is saving about $2.93 per diesel gallon equivalent. This provides an annual fuel savings of $25,413 per year for each vehicle and $1,067,339 for the entire fleet. Overall fuel savings for the customer is $2,089,199.

In summary these four customers consumed 139,747 Mcf of natural gas throughout 2014. With current fuel savings averaging around $2.69 between diesel and CNG, customers have saved $2,704,206 in 2014 on fuel. Overall, customers consumed 259,014 Mcf of natural gas and saved $5,098,916 on fuel costs through the pilot program.

IV. Conclusion

Overall, National Fuel is very pleased with the NGV Pilot Program to date. Customers have responded very favorably to this initiative, citing the availability of the buy down as an important factor in making each of these four projects a reality.

Between now and the next report, the Company will continue to promote the program as well as continue to monitor the NGV refueling installations and vehicle conversions until their contractual reporting commitments expire. An emphasis will be placed on timely data collection and evaluation process to ensure the highest level of data accuracy and to allow for a meaningful evaluation of the program by the NYPSC.

Finally, National Fuel will continue to promote the feasibility of NGVs in our service territory, both economically and environmentally. We will also continue to educate potential customers through outreach and education events.

V. Appendices

Appendix A: Program Results Summary Table

APPENDIX A - PROGRAM RESULTS SUMMARY

NATIONAL FUEL GAS DISTRIBUTION CORP.							
Natural Gas Vehicle (NGV) Partnership Pilot Program							
Report to the NY Public Service Commission							
November 2015							
Reporting Period: January 1, 2014 - December 31, 2014							
I. NFGDC Pilot Program Information							
Program Participant	**Modern Disposal**	**Innovative Transportation**	**Waste Management**	**Try-It Distributing**	**NEXUS**	**Tops Distribution**	**Program**
Location	Model City, NY	Buffalo. NY	West Seneca, NY	Lancaster, NY	Tonawanda, NY	Lancaster, NY	
Month/Year Program Contract started	June 2012	February 2013	March 2013	August 2014	June 2015	December 2015	
Annual Incremental Volume (Mcf)	48,789	1,388	46,971	15,241	6,200	175,000	**293,589**
Annual Incremental Margin	$ 53,277	$ 4,233	$ 51,611	$ 22,950	$ 56,688	$ 102,882	**$ 291,641**
Buydown Amount	$ 160,000	$ 16,000	$ 180,000	$ 86,195	$ 146,000	$ 387,401	**$ 975,596**
Simple Payback on Buydown (years)	3.0	3.8	3.5	3.8	2.6	3.8	**3.3**
II. NGV Project Information							
A. Vehicles							
1. Number of CNG Vehicles							
- Estimated number for buydown	45	1	44	43	24	55	**212**
- Actual number as of 12/31/14	48	8	42	43	16	50	**207**
2. Type of CNG Vehicles	Garbage Trucks	Tractor/Trailer Trucks	Garbage Trucks	43 Tractor/Trailer Trucks	24 Medium to Heavy Trucks	55 Tractor/Trailer Trucks	
3. CNG Vehicle Manufacturer	Peterbilt with Cummins engines	Kenworth with Cummins engines	Peterbilt with Cummins engines	Kenworth with Cummins engines	Various types	Freightliner with Cummins engines	
B. Refueling Station							
1. Type of Refueling Station Used	Own Private Station	NFG Public Station	Own Public Station	Own Public Station	Own Public Station	Own Private Station	
2. Refueling Station Manufacturer	ANGI	N/A	ET Environmental	American Natural Gas	Cobey Energy	American Natural Gas	

Appendix B: Annual Summary Reports

APPENDIX B - ANNUAL SUMMARY REPORT

	Modern Disposal		Innovative Transportation		Waste Management		Try-It Distributing		NEXUS		Tops Distribution	
NATIONAL FUEL GAS DISTRIBUTION CORP.												
Natural Gas Vehicle (NGV) Partnership Pilot Program												
Report to the NY Public Service Commission												
November 2015												
Reporting Period: January 1, 2014 - December 31, 2014												
Program Particioant												
I. Customer Pro Forma Economics												
A. Estimated Capital Costs												
1. NGV Refueling Station Installed Cost	$ 1,500,000		$ -		$ 2,400,000		$ 1,500,000		$ 2,000,000		$ 2,000,000	
2. Total CNG Vehicle Incremental Cost												
- Per Vehicle	$ 35,000		$ 30,000		$ 22,500		$ 30,000		$ 45,000		$ 30,000	
- Total Vehicles over 6 years	45		1		44		43		24		55	
- Total Cost	1,575,000		30,000		990,000		1,290,000		1,080,000		1,650,000	
3. Total NGV Project Cost	**$ 3,075,000**		**$ 30,000**		**$ 3,390,000**		**$ 2,790,000**		**$ 3,080,000**		**$ 3,650,000**	
4. Grants												
- NYSERDA	$ 1,250,000		$ -		$ -		$ 1,000,000		$ 1,000,000		$ -	
- NFGDC	$ 160,000		$ 16,000		$ 180,000		$ 86,195		$ 146,000		$ 387,401	
- Total	$ 1,410,000		$ 16,000		$ 180,000		$ 1,086,195		$ 1,146,000		$ 387,401	
5. Net NGV Project Cost	**$ 1,665,000**		**$ 14,000**		**$ 3,210,000**		**$ 1,703,805**		**$ 1,934,000**		**$ 3,262,599**	
B. Estimated Annual Fuel Usage												
1. Individual Vehicle												
- Mileage	260	Days per year	49,920	Miles	2,000	Hours	15,300	Miles	15,737	Miles	115,000	Miles
- Miles per gallon	30	Gallons per day	4	Miles per gallon	3.84	Gallons per hour	6	Miles per gallon	5	Miles per gallon	5	Miles per gallon
- Annual Diesel Usage	7,800	Gallons	12,480	Gallons	7,680	Gallons	2,550	Gallons	3,147	Gallons	23,000	Gallons
- Equivalent Natural Gas Usage	1,084.2	Mcf	1,734.7	Mcf	1,067.5	Mcf	354.5	Mcf	437.5	Mcf	3,197.0	Mcf
2. Total Fleet												
- # of Vehicles	45	Garbage Trucks	1	Tractor/Trailer Truck	44	Garbage Trucks	43	Tractor/Trailer Trucks	24	Vehicles	55	Tractor/Trailer Trucks
- Annual Diesel Usage	351,000	Gallons	12,480	Gallons	337,920	Gallons	109,650	Gallons	75,539	Gallons	1,265,000	Gallons
- Equivalent Natural Gas Usage	48,789	Mcf	1,735	Mcf	46,971	Mcf	15,241	Mcf	10,500	Mcf	175,836	Mcf
C. Estimated Annual Fuel Savings												
1. Fuel Costs												
- Current Diesel Cost	$ 3.75	per Gallon	$ 4.30	per Gallon	$ 4.28	per Gallon	$ 4.25	per Gallon	$ 4.10	per Gallon	$ 4.10	per Gallon
- Estimated Natural Gas Cost	$ 8.00	per Mcf	$ 10.50	per Mcf	$ 8.00	per Mcf	$ 8.00	per Mcf	$ 8.00	per Mcf	$ 8.00	per Mcf
- Equivalent Diesel Cost	$ 1.11	per DGE	$ 1.46	per DGE	$ 1.11	per DGE	$ 1.11	per DGE	$ 1.11	per DGE	$ 1.11	per DGE
- Unit Savings	$ 2.64	per DGE	$ 2.84	per DGE	$ 3.17	per DGE	$ 3.14	per DGE	$ 2.99	per DGE	$ 2.99	per DGE
2. Current Diesel Fuel Costs												
- Individual Vehicle	$ 29,250		$ 53,664		$ 32,870		$ 10,838		$ 12,905		$ 94,300	
- Total Fleet	$ 1,316,250		$ 53,664		$ 1,446,298		$ 466,013		$ 309,710		$ 5,186,500	
3. New Natural Gas Costs												
- Individual Vehicle	$ 8,674		$ 18,215		$ 8,540		$ 2,836		$ 3,500		$ 25,576	
- Total Fleet	$ 390,314		$ 18,215		$ 375,769		$ 121,932		$ 84,000		$ 1,406,689	
4. Refueling Station Maintenance Costs	$ 75,000		$ -		$ 120,000		$ 75,000		$ 15,108		$ 100,000	
5. Annual Savings												
- Individual Vehicle	$ 20,576		$ 35,449		$ 24,330		$ 8,002		$ 9,405		$ 68,724	
- Total Fleet	**$ 850,936**		**$ 35,449**		**$ 950,528**		**$ 419,081**		**$ 240,818**		**$ 3,879,811**	
D. Estimated Simple Pavback												
1. Before NGV Grants	3.6	Years	0.8	Years	3.6	Years	6.7	Years	12.8	Years	0.9	Years
2. After NGV Grants	2.0	Years	0.4	Years	3.4	Years	4.1	Years	8.0	Years	0.8	Years
II. Actual Customer Economics - 2014												
A. Capital Costs												
1. NGV Refueling Station Installed Cost	$ 1,500,000		$ -		$ 2,400,000		$ 1,500,000					
2. Total CNG Vehicle Incremental Cost												
- Per Vehicle	$ 40,000		$ 90,000		$ 30,000		$ 35,000					
- Total Vehicles over 6 years	8		54		42		43					
- Total Cost	2,160,000		720,000		1,260,000		1,505,000					
3. Total NGV Project Cost	**$ 3,660,000**		**$ 720,000**		**$ 3,660,000**		**$ 3,005,000**					
4. Grants												
- NYSERDA	$ 1,250,000		$ -		$ -		$ 1,000,000					
- NFGDC	$ 160,000		$ 16,000		$ 180,000		$ 96,849					
- Total	$ 1,410,000		$ 16,000		$ 180,000		$ 1,096,849					
5. Net NGV Project Cost	**$ 2,250,000**		**$ 704,000**		**$ 3,480,000**		**$ 1,908,151**					
B. Annual Fuel Usage												
1. Individual Vehicle												
- Mileage	260	Days per year	40,000	Miles	2,000	Hours per year	14,000	Miles				
- Miles per gallon	37	Gallons per day	4	Miles per gallon	4.34	Gallons per hour	5	Miles per gallon				
- Annual Diesel Usage	9,620	Gallons	11,429	Gallons	8,682	Gallons	2,979	Gallons				
- Equivalent Natural Gas Usage	1,337	Mcf	1,589	Mcf	1,207	Mcf	414	Mcf				
2. Total Fleet												
- # of Vehicles	54	Garbage Trucks	8	Tractor/Trailer Truck	42	Garbage Trucks	43	Tractor/Trailer Trucks				
- Annual Diesel Usage	519,480	Gallons	91,429	Gallons	364,653	Gallons	128,085	Gallons				
- Equivalent Natural Gas Usage	72,208	Mcf	12,709	Mcf	50,687	Mcf	17,804	Mcf				
C. Annual Fuel Savings												
1. Fuel Costs												
- Avg. Diesel Cost for 2014	$ 4.01	per Gallon	$ 4.00	per Gallon	$ 4.01	per Gallon	$ 4.01	per Gallon				
- Estimated Natural Gas Cost	$ 8.35	per Mcf	$ 11.50	per Mcf	$ 7.77	per Mcf	$ 11.00	per Mcf				
- Equivalent Diesel Cost	$ 1.16	per DGE	$ 1.60	per DGE	$ 1.08	per DGE	$ 1.53	per DGE				
- Unit Savings	$ 2.85	per DGE	$ 2.40	per DGE	$ 2.93	per DGE	$ 2.48	per DGE				
2. Current Diesel Fuel Costs												
- Individual Vehicle	$ 38,576		$ 45,714		$ 34,790		$ 11,936					
- Total Fleet	$ 2,083,115		$ 365,714		$ 1,461,165		$ 513,237					
3. New Natural Gas Costs												
- Individual Vehicle	$ 11,166		$ 18,269		$ 9,377		$ 4,554					
- Total Fleet	$ 602,938		$ 146,149		$ 393,825		$ 195,843					
4. Refueling Station Maintenance Costs	$ 14,000		$ -		$ -	per gallon cost includes maint.	$ 75,000					
5. Annual Savings												
- Individual Vehicle	$ 27,411		$ 27,446		$ 25,413		$ 7,381					
- Total Fleet	**$ 1,466,177**		**$ 219,565**		**$ 1,067,339**		**$ 242,394**					
D. Simple Payback												
1. Before NGV Grants	2.5	Years	3.3	Years	3.4	Years	12.4	Years				
2. After NGV Grants	1.5	Years	3.2	Years	3.3	Years	7.9	Years				

Appendix C: Customer Satisfaction Survey Results

Customer Satisfaction Survey

Innovative Transportation

Contact Name/Title:	Dave Harper, President
Address:	100 Sonwil Drive, Cheektowaga, NY 14225
Phone:	716/683-2600
Month/Year NGV Project Started:	February 14, 2013
Type and Size of Refueling Station Used:	NFG / Other Public Stations
Refueling Station Manufacturer:	N/A
Number and Type of CNG Vehicles:	One tractor/trailer truck as part of pilot program. Innovative now has a total of seven NGV trucks.
CNG Vehicle Manufacturer:	Engine – Cummins, Tractor – Kenworth, Tank- Agility
Amount received from National Fuel:	$16,000.00

Rate each of the following areas by highlighting a number (1 meaning complete agreement, 3 meaning neutral, 5 meaning complete disagreement)

1. **Design of NGV Refueling Station**
   - The initial design met my company's needs. (N/A) 1 2 3 4 5

   Comments: Customer refuels at public stations

2. **Installation of NGV Refueling Station**
   - The installation was smooth and seamless. (N/A) 1 2 3 4 5

   Comments: Customer refuels at public stations

3. **Purchase/Conversion of CNG Vehicles**
   - The purchase/conversion was smooth and seamless. (1) 2 3 4 5

   Comments: Had a slight delay of 1 – 2 months for 1st truck due to delays from engine manufacturer and tank supplier. Experienced 6 – 7 month delay for next 7 NGV trucks ordered.

4. NGV Operation and Maintenance

- The NGV refueling station has operated without problems. (N/A) 1 2 3 4 5
- The CNG vehicles have operated without problems. 1 2 (3) 4 5

Comments: First NGV truck – Cummins told customer they weren't changing oil filter enough. Customer had turkey gravy-like liquid coming out of oil filter, determined to be oil leaking through compressor into natural gas at NFG MSW station. Customer stopped refueling these until problem fixed in March 2014. Next three NGV trucks – experienced minor electrical problems, not associated with natural gas. Customer has been experiencing problems with CNG vehicles, especially during winter months when the temperature drops below 25 degrees. The trucks need to be warmed up for longer than their diesel trucks and they experience more maintenance issues which are three times more costly.

5. Utility NGV Support

- The local gas utility provided adequate gas infrastructure support. 1 2 (3) 4 5
- The local gas utility provided adequate financial incentive support. 1 (2) 3 4 5

Comments: Customer was originally unable to get full tank filled at NFG MSW due to 3000 psi dispenser. They also couldn't bring in full tractor/trailer, but tractor only, then pick up trailer after refueling. NFG provided them with excellent support from introduction to NGV's, personal attention and adequate financial incentives.NFG also updated their public service station to better serve their customers which allows customer to bring both tractor and trailer to fill up. These improvements cut down on the miles the customer needs to drive to refuel and increases productivity.

6. NGV Economics

- The NGV project has provided the anticipated economic benefits. 1 2 3 4 5

Comments: Cannot rate at this time. Too soon to tell. Estimated < 2 year payback based on $50,000 vehicle incremental cost and $30,000 annual savings (10,000 gallons x $3/gallon savings). Actual miles driven of 40,000 < estimated of 60,000 miles, actual 5 mpg < estimated 6 mpg. O & M of natural gas so far equal to diesel, expect less in future.

7. Overall NGV Project

- The overall NGV project has met our original expectations. 1 (2) 3 4 5

Comments: Environmental benefits a part of decision to use NGVs. The customer uses this in corporate marketing as "green" company. Due to codes, need to build separate maintenance area for NGVs (Kenworth & Try-It offer it now, Mohawk rejected doing this). They have also experienced some maintenance issues, but have said each new order of trucks comes with less issues as the technology improves.

8. Future NGV Plans

- We are considering adding additional vehicles in the future 1 2 3 (4) 5

Comments: Customer is not currently planning on purchasing any vehicles, but stated that if they had to purchase another tractor today, it would be a diesel one based on low diesel prices and the higher incremental cost of purchasing a CNG vehicle. They did state that if diesel prices rose, they would lean more towards CNG.

Customer Satisfaction Survey

Modern Disposal Services

Contact Name/Title:	Robert Trunzo
Address:	4746 Model City Road
Phone:	(716) 754-8226
Month/Year NGV Project Started:	January 2012
Type and Size of Refueling Station Used:	Time fill with 80 fill spots, 1 fast fill dispenser
Refueling Station Manufacturer:	ANGI
Number and Type of CNG Vehicles:	54 garbage trucks
CNG Vehicle Manufacturer:	Peterbilt with Cummins engines
Amount received from National Fuel:	$160,000.00

Rate each of the following areas by highlighting a number (1 meaning complete agreement, 3 meaning neutral, 5 meaning complete disagreement)

1. Design of NGV Refueling Station

- The initial design met my company's needs. (1) 2 3 4 5

Comments: Station designed by Vocational Energy. Their design met all of Modern's expectations and needs.

2. Installation of NGV Refueling Station

- The installation was smooth and seamless. (1) 2 3 4 5

Comments: Vocational Energy acted as General Contractor, and subcontracted out various elements of the construction. The station was built in a very timely manner, from July 2011 conception to December 2011 commissioning.

3. Purchase/Conversion of CNG Vehicles

- The purchase/conversion was smooth and seamless. 1 (2) 3 4 5

Comments: Modern purchased all 54 trucks from McNeilus, who was the upfitter, responsible for adding the CNG tank, fuel lines, etc. to the Peterbilt truck. They received trucks on time with only slight delivery delays.

4. NGV Operation

- The NGV refueling station has operated without problems. 1 (2) 3 4 5
- The CNG vehicles have operated without problems. 1 2 (3) 4 5

Comments: Station – Modern currently has 2 compressors, with a 3rd on order for use as a back-up. One compressor can handle approximately up to 40 trucks, so if one compressor is down, they have problems. No problems with the operation of the slow fill stations to date. Vehicles – Modern has experienced a fair amount of problems with the CNG trucks, including electronics problems with the engine water/temperature sensor, some cracked exhaust manifolds, problems with piston heads and turbos, etc. They are dealing with Cummins Engine on an ongoing basis to resolve these issues.

5. Utility NGV Support

- The local gas utility provided adequate gas infrastructure support. (1) 2 3 4 5
- The local gas utility provided adequate financial incentive support. (1) 2 3 4 5

Comments: Very good support from National Fuel with respect to both gas infrastructure (mainline upgrade, service and meter) and financial incentive assistance.

6. NGV Economics

- The NGV project has provided the anticipated economic benefits. (1) 2 3 4 5

Comments: Very Modern has experienced strong fuel cost savings with CNG. Expected CNG trucks to be 5 – 10% less fuel efficient than diesel trucks, have found them to actually be 25% less fuel efficient. Old diesel trucks used 35 – 40 gallons/day. The new CNG trucks are using 70 – 75 DGE/day. Cost of each CNG truck had a $40,000 upcharge vs. diesel truck. Modern's current natural gas cost is approximately $1.05 DGE, so with diesel running around $2.50/gallon, CNG trucks are saving approximately $1.45/gallon.

7. Overall NGV Project

- The overall NGV project has met our original expectations. (1) 2 3 4 5

Comments: The NGV project has met Modern's expectations. The station runs great, and the vehicles have generated strong fuel cost savings. The CNG trucks also run quieter, and give off less smell than the diesel trucks.

8. Future NGV Plans

- We are considering adding additional vehicles in the future. (1) 2 3 4 5

Comments: Modern has a total fleet size of 228, 54 of which are CNG. Modern is interested in investigating portable CNG refueling capabilities for their CNG fleet

Customer Satisfaction Survey

Try-It Distributing

Contact Name/Title:	Jeff Gicewicz
Address:	4155 Walden Avenue, Lancaster NY 14086
Phone:	716/651-3551 x 142
Month/Year NGV Project Started:	January 2014
Type and Size of Refueling Station Used:	(2) 200 HP ANGI Compressors
Refueling Station Manufacturer:	American Natural Gas
Number and Type of CNG Vehicles:	43 Tractor trucks (38 single axle, 5 tandem axle)
CNG Vehicle Manufacturer:	Kenworth Trucks with Cummins 8.9 Liter engine
Amount received from National Fuel:	$96,849

Rate each of the following areas by highlighting a number (1 meaning complete agreement, 3 meaning neutral, 5 meaning complete disagreement)

1. Design of NGV Refueling Station

- The initial design met my company's needs. (1) 2 3 4 5

Comments: Station was designed by American Natural Gas (ANG) with input from Try-It. Consists of 2 dispensers, and 2 hoses per dispenser (one high flow and one low flow), both at 3600 psi. Try-It is very satisfied with station design.

2. Installation of NGV Refueling Station

- The installation was smooth and seamless. 1 (2) 3 4 5

Comments: Try-It had some issues with the credit card reader, but other than that, the installation was very smooth and the issue has since been resolved. ANG was the general contractor and sub-contracted out work to Beavers Petroleum and Ingalls for portions of the project. Try-It had some typical startup issues with the station, such as moisture in the fuel / fuel filters, but these went away fairly quickly. The station is now working flawlessly and has never experienced any down time.

3. Purchase/Conversion of CNG Vehicles

- The purchase/conversion was smooth and seamless. (1) 2 3 4 5

Comments: Try-It leased the new CNG trucks through Bank of America on an 8 year lease. The $1 million grant from NYSERDA was applied as a down payment on the lease to lower the monthly lease payment. The leasing process went very smoothly and Try-It expects to run the CNG trucks for 10 years, past the 8 year lease term.

4. NGV Operation

- The NGV refueling station has operated without problems. (1) 2 3 4 5
- The CNG vehicles have operated without problems. 1 (2) 3 4 5

Comments: Station: Try-It has a 10 year land lease agreement with ANG to build/own/operate/maintain the station. To date, the station has operated very well and has never experienced any down time.

Vehicles: Try-It has an 8 year maintenance contract with Kenworth for the CNG trucks. Of all aspects of the NGV project, the most issues have been here. The CNG trucks have had some problems, especially in the cold weather, when ice crystallization has occurred in the air intake from the intercooler, causing the trucks' sensors to foul up, and the engine goes to the "limp mode" where it only operates partially. The intercooler was designed by Cummins and manufactured by Kenworth. Their answer to this problem was to place a cover on the front grill of the truck to minimize crystallization. This front grill cover wasn't available for the 2013/2014 winter, but was for the 2014-2015 winter and the customer has seen an estimated 95% reduction in these cold weather related CNG vehicle issues after installing the grill covers. The customer does still need to warm up the trucks for approximately twenty minutes, which is longer than the diesel equivalent. Finally, fuel mileage has suffered in the cold weather. Try-It expected to be within 5 – 10% of old diesel truck mileage of 5–6 mpg, but are only getting 4.27 mpg with CNG trucks.

5. Utility NGV Support

- The local gas utility provided adequate gas infrastructure support. (1) 2 3 4 5
- The local gas utility provided adequate financial incentive support. (1) 2 3 4 5

Comments: Very good support from NFG, both gas infrastructure and financial assistance. Only

issue was gas pressure – NFG originally offered 15 psi, but finally was able to agree to 45 psi (however not guaranteed, just best efforts).

6. NGV Economics

- The NGV project has provided the anticipated economic benefits. (1) 2 3 4 5

Comments: The NGV project had approximately a 5 year payback, and Try-It expects to keep the trucks 10 years. Trucks are getting around 4 mpg, and are driven about 12,000 miles/year, resulting in approximately 3,000 DGE of CNG used. At about a $2/gallon cost savings with CNG, this equals $6,000 / year savings for each truck. For the active fleet of 43 CNG trucks, this is approximately $258,000/year in annual savings. The upcharge for CNG trucks was around $35,000 - $40,000, largely due to the 45 DGE fuel tank. Total upcharge for the whole fleet of 43 trucks was approximately $1.5 – $1.7 million. This cost was reduced to about $0.5 - $0.7 million with the $1 million NYSERDA grant.

7. Overall NGV Project

- The overall NGV project has met our original expectations. 1 (2) 3 4 5

Comments: Overall project has been very good, with the only real problems area being the original icing in the vehicles in cold weather, especially < 20°F and the decreasing diesel prices which make the project less economically effective.

8. Future NGV Plans

- We are considering adding additional vehicles in the future. 1 2 (3) 4 5

Comments: Try-It was considering an additional NGV option for their 33 Ford Transit Connect vans, but they decided to purchase diesel trucks because the fuel prices have dropped significantly. However, they will be monitoring the economics and reliability of their current fleet as well as the future diesel prices when purchasing new vehicles in the future.

Customer Satisfaction Survey

Waste Management

Contact Name/Title:	Tom Comfort
Address:	100 Ransier Drive, West Seneca, NY 14224
Phone:	(716) 677-7311
Month/Year NGV Project Started:	January 2011
Type and Size of Refueling Station Used:	(2) IMW Model 50 Compressors, 250 HP each
Refueling Station Manufacturer:	ET Environment
Number and Type of CNG Vehicles:	42 Peterbilt garbage trucks with Cummins engines
CNG Vehicle Manufacturer:	Peterbilt
Amount received from National Fuel:	$160,000.00

Rate each of the following areas by highlighting a number (1 meaning complete agreement, 3 meaning neutral, 5 meaning complete disagreement)

1. Design of NGV Refueling Station

- The initial design met my company's needs. Inside Private Station 1 2 (3) 4 5
  Outside Public Station 1 (2) 3 4 5

Comments:

Inside Station – problems with design by ET Environment. They are doing things differently at other 2 new nearby stations in Rochester & Erie. They're using a different, larger capacity gas dryer. This station was one of Waste Management's first cold weather stations. Design was all slow-fill, didn't include fast-fill, had a poor defueling post layout (for use when need to remove CNG from tank to work on it). It also used a new dryer design (carbon desiccant) which was one of the 1st to try this type. Finally, design did not include individual metering of each fill post, just total.

Outside Station – good overall design. Only drawbacks are speed (Try-It has a faster dispenser) and is located in a tight spot for some vehicles to get in and out of.

2. Installation of NGV Refueling Station

- The installation was smooth and seamless. N/A 1 (2) 3 4 5

Comments: This was all new to local WM personnel, they weren't involved in construction planning process as much as they would have liked. Actual schedule of building was good – on time, progress reports, photos, etc.

3. Purchase/Conversion of CNG Vehicles

- The purchase/conversion was smooth and seamless. 1 (2) 3 4 5

Comments: Purchase of CNG garbage trucks was new to local WM personnel. They experienced some delays in receipt of vehicles – 1 to 2 monthly for initial 25 trucks. Original CNG tanks were not sized right for WM business. They were 62 gallons, however WM needed to add another 19 gallon tank to get them through the day. WM also experienced some minor apprehension/resistance from a few drivers, but this has gone away with time and the driver's are enjoying the newer CNG vehicles.

4. NGV Operation

- The NGV refueling station has operated without problems. 1 2 (3) 4 5
- The CNG vehicles have operated without problems. 1 2 (3) 4 5

Comments: Station – had frozen nozzles at truck dispensers (big problem in 1st winter, then went away in 2012/2013, recurred again in March 2014). Also experienced minor oil leaks, valve changes, and contaminated oil and gas compressor at times. After installing a dual dryer, the issues with the wet gas have subsided. There was also an issue with the credit card reader where it was cutting off at $50 and outside customers were not happy.

NGVs – experienced occasional truck fires caused by poor exhaust vent design – went straight up and heated garbage before it was dumped into dumpster. Also had ongoing occasional problems with engines year round, especially in colder weather and extreme temperature swings.

Utilizing front grill covers, as well as heating up the trucks thirty minutes prior to driving has helped the trucks maintain functionality in extremely cold weather. The customer has been seeing some issues with the Cummins engines. Though Cummins has been very responsive and cooperative, rebuilding an engine leaves a truck out of commission for about 5 days. On a positive note, WM has changed oil replacement intervals from 400 hours for diesel to 1200 hours for CNG.

5. Utility NGV Support

- The local gas utility provided adequate gas infrastructure support. (1) 2 3 4 5
- The local gas utility provided adequate financial incentive support. (1) 2 3 4 5

Comments: Gas infrastructure – good support (meter location, modems).

Financial support – Very good. Customer has been happy with continued support from National Fuel.

6. NGV Economics

- The NGV project has provided the anticipated economic benefits. (1) 2 3 4 5

Comments: Very good. Standard diesel trucks cost approximately $300,000. CNG trucks cost $330,000 ($30,000 upcharge). Latest analysis of 2012 vs. 2013 fuel charges show $357,000 savings, plus $235,000 fuel tax credit for total savings of $592,000 (39%)

7. Overall NGV Project

- The overall NGV project has met our original expectations. 1 (2) 3 4 5

Comments: WM was disappointed in engines and support from Cummins Corp. HQ chose Peterbilt trucks with Cummins CNG engines. Current diesel trucks are Mack trucks with Mack or Volvo engines. Cummins CNG engines were unproven, but WM fortunately bought a 5 year extended warranty package from Cummins. Across the USA, WM has bought Peterbilt trucks for most CNG applications. In the two newest locally, they are using Peterbilt in Erie and Mack in Rochester. Mileage for the CNG vehicles is also not exactly where they would like it. Ultimately, the fuel savings have outweighed the problems encountered along the way.

8. Future NGV Plans

- We are considering adding additional vehicles in the future. (1) 2 3 4 5

Comments: WM has exhausted their slow fill capacity for their trucks at the inside station. However, they could use the public fast fill station to accommodate any expansion plans. WM has plans to replace the remaining 6 diesel trucks with CNG.

Customer Satisfaction Survey

Tops Markets, LLC

Contact Name/Title:	Ron Ferri
Address:	5873 Genesee Street, Lancaster NY 14086
Phone:	(716) 515-2383
Month/Year NGV Project Started:	January 2015
Type and Size of Refueling Station Used:	(2) 200 HP Cobey Compressors
Station Manufacturer:	American Natural Gas
Number and Type of CNG Vehicles:	55 Tractors
CNG Vehicle Manufacturer:	Ryder, Cummins Engines
Amount received from National Fuel:	$387,401

Rate each of the following areas by highlighting a number (1 meaning complete agreement, 3 meaning neutral, 5 meaning complete disagreement)

1. **Design of NGV Refueling Station**

- The initial design met my company's needs. (1) 2 3 4 5

Comments: The station was designed by Wendel. Their design met all of Tops' expectations and needs.

2. **Installation of NGV Refueling Station**

- The installation was smooth and seamless. (1) 2 3 4 5

Comments: American Natural Gas constructed the station based on the designs Wendel provided. The station was originally scheduled to be completed by the end of May 2015, but was not completed until the end of June 2015. The station has operated well and there have been no shut downs.

3. Purchase/Conversion of CNG Vehicles

- The purchase/conversion was smooth and seamless. 1 (2) 3 4 5

Comments: Tops leased 55 vehicles from Ryder under a 6.5 year term. The vehicles were scheduled to be delivered in early July, but this was delayed due to the retrofitting taking longer than anticipated. The customer has eight trucks in service, with the remaining 47 trucks expected to be delivered in the beginning of November.

4. NGV Operation

- The NGV refueling station has operated without problems. (1) 2 3 4 5
- The CNG vehicles have operated without problems. 1 (2) 3 4 5

Station Comments: Tops has a 6.5 year purchase agreement with American Natural Gas. To date, the station has operated very well.

Vehicle Comments: Tops has a 6.5 year lease with Ryder for the CNG trucks. There have been a few issues with the trucks, but they were cleared up during the testing phase. Currently, Tops only has 8 vehicles in service and they have been working well. More detail information will be able to be provided once the customer has all 55 trucks in service.

5. Utility NGV Support

- The local gas utility provided adequate gas infrastructure support. (1) 2 3 4 5
- The local gas utility provided adequate financial incentive support. (1) 2 3 4 5

Comments: NFG has provided great support in regards to both gas infrastructure and financial incentives. Tops was very pleased with the information National Fuel provided and the facilitator role they took on in the early stages of the project. Had it not been for the financial incentive provided by the pilot program, they likely would not have considered converting to CNG.

6. NGV Economics

- The NGV project has provided the anticipated economic benefits. (1) 2 3 4 5

Comments: While numbers are preliminary and the trucks are not all in service yet, Tops expects to experience almost an immediate payback on their CNG conversion.

7. Overall NGV Project

- The overall NGV project has met our original expectations. (1) 2 3 4 5

Comments: Aside from the slight delay in the vehicles being delivered and going into service, Tops is very happy with the project.

8. Future NGV Plans

- We are considering adding additional vehicles in the future. (1) 2 3 4 5

Comments: Although there are currently no more trucks needed, Tops is frequently expanding and purchasing more stores. If more trucks are needed to meet the increasing distribution demands, they would purchase CNG as long as the truck was going to be used at least 5 days a week.

Customer Satisfaction Survey

NEXUS Natural Gas

Contact Name/Title:	Chris Guard
Address:	380 Grand Island Blvd, Buffalo, NY 14150
Phone:	716-875-1209
Month/Year NGV Project Started:	January 2015
Type and Size of Refueling Station Used:	2 (200 HP) Cobey/GE Compressors
Station Manufacturer:	Lane Construction
Number and Type of CNG Vehicles:	24 (Light to Heavy-Duty Vehicles)
CNG Vehicle Manufacturer:	N/A
Amount received from National Fuel:	$146,000

Rate each of the following areas by highlighting a number (1 meaning complete agreement, 3 meaning neutral, 5 meaning complete disagreement)

1. **Design of NGV Refueling Station**
- The initial design met my company's needs. 1 (2) 3 4 5

Comments: The station was designed by JHA Associates out of Binghamton.

2. **Installation of NGV Refueling Station**
- The installation was smooth and seamless. (1) 2 3 4 5

Comments: Lane Construction built the station based on the designs that JHA Associates provided. The station was built and opened on time and the customer was pleased.

3. Purchase/Conversion of CNG Vehicles

- The purchase/conversion was smooth and seamless. (1) 2 3 4 5

Comments: There are seven different partners that make up NEXUS Natural gas and all of them purchase and/or lease their vehicles from different manufacturers and entities. The majority of vehicles have arrived on time, but one partner did experience a one month delay on the delivery of a truck.

4. NGV Operation

- The NGV refueling station has operated without problems. 1 2 (3 4) 5
- The CNG vehicles have operated without problems. (1) 2 3 4 5

Station Comments: The customer has had some issues with the NGV refueling station that are currently being worked through. The dispensers are not allowing tanks to fill completely and there is also an issue with the credit card reader interface. Cobey is currently responding to the issues and helping the customer work through them.

Vehicle Comments: The vehicles have all been functioning well. There is one sensor issue with a Chevy pickup, but the customer is in talks with the dealership to have it fixed.

5. Utility NGV Support

- The local gas utility provided adequate gas infrastructure support. (1) 2 3 4 5
- The local gas utility provided adequate financial incentive support. (1) 2 3 4 5

Comments: The customer is very pleased with the infrastructure and financial support that the Company provided to them.

6. NGV Economics

- The NGV project has provided the anticipated economic benefits. (N/A) 1 2 3 4 5

Comments: At this early stage, the customer is unable to specify the economic benefits provided.

7. Overall NGV Project

- The overall NGV project has met our original expectations. 1 (2) 3 4 5

Comments: The customer is very pleased with the fuel savings provided by the CNG vehicles. Aside from the issues with the refueling station, they are satisfied with the project.

8. Future NGV Plans

- We are considering adding additional vehicles in the future. (1) 2 3 4 5

Comments: The NEXUS Natural Gas partners have plans to convert a combined 6 vehicles to CNG or dual fuel over the next year.

Appendix D: NGV Equipment "Best Practices Guide"

NGV "Best Practices Guide"

I. Background

In the past year since this program has been in place, National Fuel has learned a number of lessons that are set forth here.

II. Lessons Learned

A. Design of NGV station

In regards to potential problems regarding gas quality, the design team should request localized gas composition data from their gas utility in order to ensure the station is properly designed to operate as intended. Assumptions that the utility system supply aligns with the interstate pipeline standard of 7 lbs. of water vapor content is not a safe assumption. Parts of our system at certain times of the year can reach as high as 25 or 30 lbs.

Any time-fill refueling installation should consider individual fill post metering. This will assist the customer in monitoring the vehicle's performance.

B. Installation of NGV station

Problems included some startup issues such as moisture in the fuel/fuel filters and credit card readers.

The credit card system should also be set up to accept charges up to $150.00. Several customers are fueling large tractors. These vehicles will require a higher amount fuel than the typical car or small truck.

The customers felt the installations should actively involve the local personnel in the planning and construction process. This can assist the them in troubleshooting any issues.

C. Purchase/conversion of CNG vehicles

Some problems included delays in the receipt of the vehicles. The delays ranged from one month to seven months.
Other problems involved the reluctance of the drivers. This can be resolved by educating and training the drivers. Many of the drivers assumed that natural gas was more dangerous than diesel fuel. Once they were trained properly, the drivers were more comfortable driving the NGV's.

The customers agreed on the importance of sizing the fuel tank correctly. Based on the ambient temperature outside, the mileage can be significantly impacted. This should be accounted for in the cold weather climates.

D. Start-up and operation of NGV station and vehicles

Any station design should consider cold weather variations. One customer experienced frozen nozzles at the truck dispensers. This was corrected during the previous winter but has reoccurred this past winter. Some minor oil leaks, valve changes and oil leaking into the gas compressor were discovered during operation.

The vehicles experienced a fair amount of problems. The problems ranged from water/temperature sensors, exhaust manifolds, turbos, oil like substance in filters and extreme cold weather disruptions.

Some customers discovered a gravy-like substance coming out of their oil filters. The substance was determined to be oil leaking through the compressor into the natural gas. This problem appears to be corrected with the newly designed stations.

During extremely cold weather, ice crystallization has occurred in the air intake from the intercooler. This caused the trucks to not operate properly. The resolution was to place a cover on the front grill of the truck to minimize the crystallization.

Another factor affecting the economics of these NGV projects is the diesel fuel trucks operated about 20% more efficient than the CNG trucks. The diesel trucks got about 5 to 6 miles per gallon and the CNG trucks are getting 3.5 to 4 miles per gallon. This needs to be accounted for when analyzing the projected payback.

Appendix E: NGV – Related Articles, Press Releases, Etc.

- Business First article (4/9/2014) on NGV Pilot
- Business First article (4/25/2014) on NGV Pilot
- Cheektowaga Bee article (2/6/2014) on NGV Pilot
- National Fuel article on Modern Disposal's NGV project
- NYSERDA article (2/22/2012) on Modern Disposal's NGV project
- West Seneca Bee article (10/27/2011) on Waste Mgt 's NGV project
- Sonwil Distribution Press Release (1/2/2014) on NGV project
- Business First article (5/10/2013) on Try-It NGV project
- NYSERDA article (12/13/2013) on Try-It NGV project
- Business First article (9/1/2015) on Nexus 's NGV project
- Buffalo News article (8/30/2015) on NFTA's NGV project
- Business First article (9/2/2015) on Tops's NGV project
- Buffalo News article (8/31/2015) on Tops & Nexus's CNG Station projects

From the Business First
:http://www.bizjournals.com/buffalo/blog/morning_roundup/2014/04/sonwil-sees-savings-down-the-road-with-green-fleet.html

Apr 9, 2014, 1:01am EDT

Sonwil sees savings down the road with green fleet

David Bertola
Buffalo Business First Reporter- *Business First*
Email | Twitter | Google+

Sonwil Distribution is adding to its fleet of natural gas-powered trucks and is looking to hire a handful of five drivers.

The company, like others in Western New York that have converted entire fleets or added a few green vehicles, are liking the early returns on their investments.

Last year, Sonwil spent $845,000 on four natural gas-powered trucks. The week of April 7, the company was due to have two more new trucks delivered. Dave Harper, president of two Sonwil divisions — Transportation and Consolidation Service and Innovation Transportation Services — plans on ordering two more in the coming weeks. These would arrive in the summer. All total, the four new trucks total about $880,000.

"If you look long term, there will be a cost savings," he said, adding that they could start seeing savings after about a year and a half.

According to data Sonwil collected for a study conducted last year, they saved nearly 200,000 pounds of carbon dioxide.

"Probably more important in our world of trucking and warehousing is that we're doing something good for the environment," he said. "Our big customers are into sustainability and rightly so. We're contributing to that."

Meanwhile, **Try-It Distributing Co.** Inc. converted its leased fleet of 43 trucks to natural gas on Dec. 18. Additionally, in a partnership with American Natural Gas, the company opened a compressed natural gas (CNG) filling station in front of Try-It's 4155 Walden Avenue headquarters.

There have been challenges, however. Jeff Gicewicz, vice president of corporate holdings at Try-It, said that the sub-zero temperatures this past winter caused ice to form on air intakes within the engine.

"Everyone I talk to about this says we picked a hell of a year to start this," he said.

The problem was remedied by installing a part called a grill guard, which will reduce air flow into the engine compartments. Gicewicz said by next winter, all vehicles will be outfitted with them.

He hasn't run any reports in terms of cost savings or the performance of the filling station, which is open 24 hours, used by Try-It and open to the public.

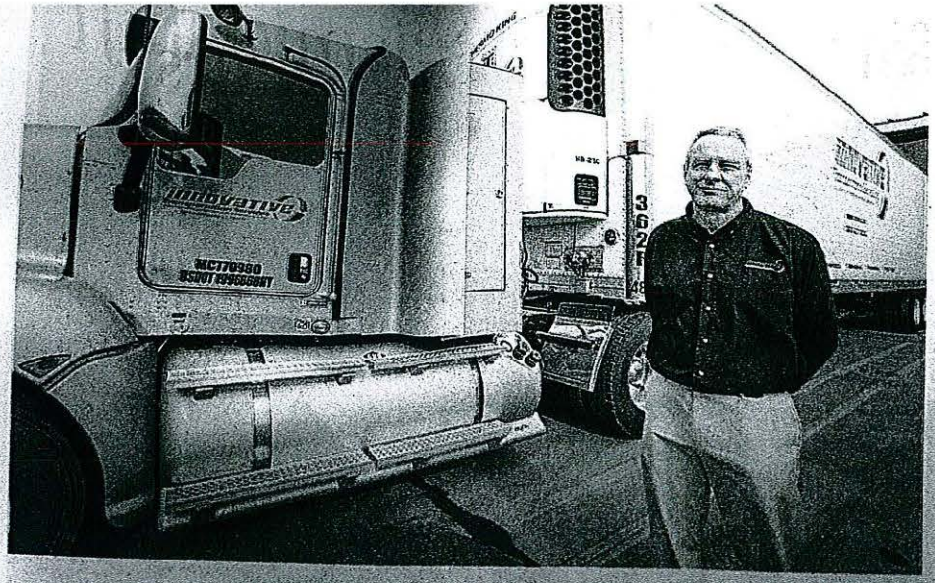
"We're definitely on target with our usage on the Try-It side and obviously we anticipated those that would support investing into the station," he said. "From a public standpoint, I'm sure we're north of expectations, none of which were etched in stone."

He said that among those that are filled up at the station include trucks from **Waste Management** Inc., which added CNG trucks to its fleet in recent years. It also opened a CNG filling station in West Seneca.

Currently, Waste Management has 42 CNG trucks and six diesel trucks, which were new when they began the conversion in 2011.

Waste Management has no immediate plans to add to its fleet, but is looking to hire a driver.

David Bertola covers small business, energy and marketing



JIM COURTNEY

Dave Harper, president of two Sonwil Distribution divisions – transportation and consolidation services and innovation transportation services – will have eight natural gas-powered trucks by year-end. He said the company could start seeing savings after 18 months.

4/25/14

GOING GREEN

Natural-gas truck fleets expected to pay off for local companies

Sonwil Distribution is adding to its fleet of natural gas-powered trucks and is looking to hire five drivers.

Last year, the company spent $845,000 on four natural gas-powered trucks. Two more new trucks recently were delivered. And Dave Harper, president of two Sonwil divisions – transportation and consolidation services and innovation transportation services –is ordering two more.

All told, the four trucks total about $880,000.

The company, like others in Western New York that have converted entire fleets or added a few green vehicles, is liking the early return on investment.

"If you look long term, there will be a cost savings," Harper said.

According to data collected by Sonwil for a study conducted last year, the company saved nearly 200,000 pounds of carbon dioxide.

"Probably more important in our world of trucking and warehousing is that we're doing something good for the environment," he said. "Our big customers are into sustainability, and rightly so. We're contributing to that."

Meanwhile, Try-It Distributing Co. Inc. converted its leased fleet of 43 trucks to natural gas on Dec. 18. Additionally, in a partnership with American Natural Gas, the company opened a compressed natural gas (CNG) filling station in front of Try-It's headquarters at 4155 Walden Ave.

Jeff Gicewicz, vice president of corporate holdings at Try-It, said sub-zero temperatures this winter caused ice to form on air intakes in the engines. The problem was remedied by installing a grill guard, which reduces air flow into the engine compartments.

Gicewicz said by next winter, all vehicles will be outfitted with the guards.

He hasn't run any reports in terms of cost savings or the performance of the filling station, which is open 24 hours and used by Try-It and the public.

"We're definitely on target with our usage on the Try-It side, and obviously we anticipated those that would support investing into the station," he said.

Among the vehicles that are filled at the station are trucks from Waste Management Inc., which added CNG trucks to its fleet in recent years. The company also opened a CNG filling station in West Seneca.

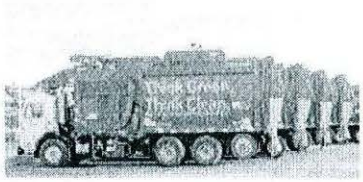
▸ UPCOMING

Cheektowaga Bee
Founded 1977

2014-02-06 / Local News

Compressed natural gas driving Western New York into the future

by JULIE HALM
Lancaster/Depew Editor



Waste Management has converted 40 vehicles locally to run on compressed natural gas, a cleaner and cheaper alternative to traditional gasoline.

Compressed natural gas is making its way into the vehicular infrastructure of Western New York, primarily by way of large, industrial fleets.

The National Fuel website identifies CNG as the transportation fuel of the future, and many businesses are in agreement and making the change to move away from traditional gasoline and diesel to the more environmentally and wallet-friendly fuel.

While the changeover can be a costly proposition — a class 8 vehicle at Waste Management costs roughly $300,000 to replace one truck — the returns can be great. The price of an equivalent gallon of CNG in the area is hovering around $2, while diesel can cost more than $4.

Additionally, the fuel option can extend the life of a vehicle's engine and less frequent oil changes. According to Lori Caso of Waste Management, preliminary data indicates that CNG vehicles will have between 10 and 15 percent improvement in maintenance costs.

"It's cleaner, it's greener, it's quieter and you don't get a diesel smell associated with them," said Caso of the trucks. In addition to the other benefits, the trucks produce less noise than their diesel-fueled counterparts, which Caso says is a perk for any community with CNG vehicles in it.

In December, Try-It Distributing Co. of Lancaster co-opened a fueling station which is accessible to the public, following a growing trend in the area.

"This wasn't a slam-dunk decision, but we could live with the payback, and it was the right thing to do," said Paul Vukelic, president and chief operating officer of Try-It. The company received a $1 million grant through New York State Energy Research and Development Authority, but the conversion cost roughly $1.5 to complete.

According to Caso, Waste Management has already converted 40 local vehicles to CNG, but the company intends to convert 80 percent of its Class 8 fleet — residential and commercial garbage trucks — to run on natural gas. For each truck running on CNG, the company will reduce its use of diesel fuel by an average of 8,000 gallons per year, according to Caso.

Waste Management and Try-It Distributing are also making the change with financial and environmental implications, available to the public, by building stations open to consumers. Waste Management has stations in West Seneca, as well as Rochester, although CNG is ultimately most cost-effective for large, commercial fleets.

The implications of conversion to CNG fuel are long-term in their nature with the environmental impact being a significant one.

"Natural gas reduces emissions as opposed to gasoline because it produces 75 percent less carbon monoxide, 50 percent less nitrogen oxides and 25 percent less carbon dioxide once consumed," said documentation on National Fuel's website. "Natural gas also produces 50 percent less engine noise than a diesel engine."

According to the website, the alternative fuel source is also beneficial to the American economy as a whole.

"Due to its abundant supply, natural gas will last for more than 100 years. Fortunately, natural gas is also a domestic source of energy, more than 90 percent is produced in North America," said the site.

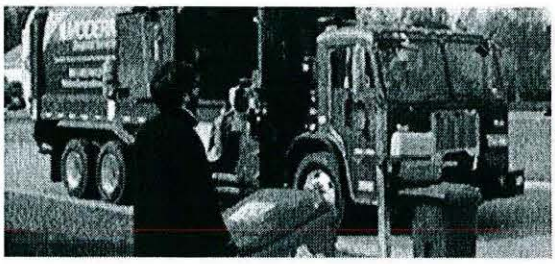
For more information on where fueling stations in the area can be found, visit www.cngnow.com/stations/Pages/information.aspx.

email: julieh@beenews.com

Return to top

Modern Corporation:

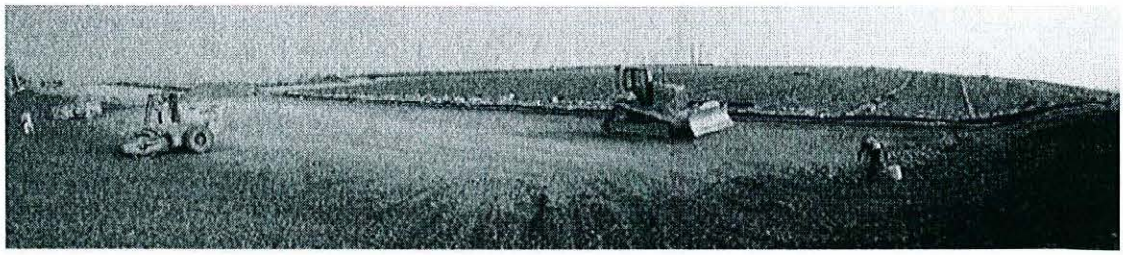
Compressed Natural Gas Fueling Station



Modern Corporation, a 48-year-old company with a long history of clean-energy projects celebrated the opening of a compressed natural gas fueling station at the company's headquarters in late 2012. Along with $1.25 million in U.S. Department of Energy Clean Cities funding from NYSERDA, Modern purchased 15 compressed natural gas (CNG) garbage trucks and installed the CNG fueling station. The company is invested an additional $3.9 million into the project, and is planning to continue purchasing additional CNG trucks. The new station can fill 40 vehicles overnight.

The opening of the fueling station at Modern Disposal is something that Niagara County can be extremely proud of," said state Sen. George Maziarz. "As chair of the Senate Energy Committee, I see how important it is to invest in alternative fuels. I commend Modern and NYSERDA for this collaborative effort, as it will not only create job opportunities but will also result in a cleaner environment for all residents of Niagara County."

"Modern is thrilled to be involved with a project that is a win-win for us, our customers and the community," said Gary Smith, P.E., C.O.O. of Modern Corporation. Modern has had a long history with clean-energy projects, and we will continue to invest in environmentally-friendly solutions in the future."



Modern, which owns and operates an on-site landfill, has a variety of clean-energy projects. The company burns its landfill-generated methane using 11 generators to create 12 megawatts of electricity, then redirects the waste-heat to maintain a 12-acre hydroponic greenhouse, H2Gro. The power plant capacity is enough to provide electricity to more than 10,000 homes. The computer-controlled greenhouse uses crushed coconut husks to grow tomatoes – 5 million pounds last year.

Challenges and Opportunities

Despite clean energy advances, the Niagara County company's diesel-fueled trash collection truck fleet remained its biggest source of emissions. Given that the transportation sector accounts for 76 percent of the oil consumed in New York, transitioning to compressed natural gas (CNG) offers businesses a

cleaner alternative for heavy-duty fleets. When used as a transportation fuel, natural gas can reduce greenhouse gas emissions by up to 25 percent when compared to petroleum fuels, and can significantly reduce other pollutants as well. Using alternative transportation fuels, such as natural gas, propane, electricity and biofuels, help reduce dependence on imported petroleum while lowering emissions. In addition, many alternative fuels cost less than gasoline or diesel per mile driven, which can help drivers save money over the life of their vehicles.

CNG vehicles have lower emissions of greenhouse gases, particulates and nitrogen oxides because natural gas is a cleaner fuel that burns more completely than diesel. The vehicles are also quieter than diesel-powered trucks because they have a different type of engine.

Real Results

Modern Disposal's CNG fuelling station and truck purchases were completed in January 2012. Throughout 2012, the trucks drove more than 450,000 miles and the CNG station dispensed more than 200,000 gasoline gallon equivalents (GGE) of CNG, reducing GHG emissions by about 350 tons, particulate matter by 700 pounds., and nitrogen oxides by more than 5,000 pounds. Based on Modern's positive experience with the CNG trucks, the company continues to add new CNG vehicles to its fleet.

With federal and state initiatives adding CNG fueling stations across the state on an ongoing basis, Modern has proven itself as an early adopter of clean-energy technologies, yielding benefits for its business as well as the environment in the area its clients are served.

Available Fueling Stations

According to the U.S. Department of Energy, there are now 106 CNG filling stations in New York State, including 34 that are open to the public. NYSERDA has helped pay for 18 stations, other than Modern Disposal. Of the 18, 10 are on Long Island and the others are distributed across the state.

Modern Disposal Services Opens Compressed Natural Gas Fueling Station With Funding Assistance from NYSERDA

Company Invests in 15 CNG-Powered Garbage Trucks, Reducing Fossil Fuel Use and Greenhouse Gas Emissions

February 22, 2012

Modern Disposal Services of Model City and the New York State Energy Research and Development Authority (NYSERDA) celebrated the opening of a compressed natural gas fueling station at the company's headquarters today.

NYSERDA provided $1.25 million in U.S. Department of Energy Clean Cities funding to help purchase 15 compressed natural gas (CNG) garbage trucks and install the CNG fueling station. The company is investing an additional $3.9 million into the project.

Modern, a 48-year-old company with a long history of clean-energy projects, is planning to continue purchasing additional CNG trucks. The new station can fill 40 vehicles overnight, and the company plans to have nearly 30 CNG vehicles by the end of 2012, or about a quarter of its fleet.

CNG vehicles are cleaner than trucks that run on diesel. They have lower emissions of greenhouse gases, particulates, and nitrogen oxides. The vehicles are also quieter than diesel-powered trucks.

"Modern is thrilled to be involved with a project that is a win-win for us, our customers and the community," said Gary Smith, P.E., C.O.O. of Modern Corporation. "We would also like to thank NYSERDA for its role in helping to fund this environmentally-responsible initiative. Modern has had a long history with clean-energy projects, and we will continue to invest in environmentally-friendly solutions in the future."

When used as a transportation fuel, natural gas can reduce greenhouse gas emissions by up to 25 percent when compared to petroleum fuels, and can significantly reduce other pollutants as well, according to the U.S. Environmental Protection Agency. Natural gas is the cleanest burning alternative-transportation fuel commercially available today. The use of domestically-produced alternative fuels such as natural gas, propane, electricity and bio-fuels can curb harmful emissions and help reduce our dependence on imported petroleum.

"The transportation sector accounts for 67 percent of the oil consumed in the United States. Without a comprehensive plan to address this consumption, the number is projected to reach 72 percent by 2020," said Francis J. Murray Jr., President and CEO of NYSERDA. "NYSERDA is proud to join forces with Modern Disposal to unveil this major investment in alternative transportation fuels and help continue to reduce the state's petroleum consumption."

Officials from Modern and NYSERDA joined state Sen. George Maziarz and other dignitaries in a ribbon-cutting ceremony at the new CNG station.

"The opening of the fueling station at Modern Disposal is something that Niagara County can be extremely proud of," said state Sen. George Maziarz. "As chair of the Senate Energy Committee, I see how important it is to invest in alternative fuels. I commend Modern and NYSERDA for this collaborative effort, as it will not only create job opportunities but will also result in a cleaner environment for all residents of Niagara County."

Modern, which owns and operates an on-site landfill, has a variety of clean-energy projects. The company burns its landfill-generated methane using 11 generators to create 12 megawatts of electricity, then redirects the waste-heat to maintain a 12-acre hydroponic greenhouse, H2Gro. The power plant capacity is enough to provide electricity to more than 10,000 homes. The computer-controlled greenhouse uses crushed coconut husks to grow tomatoes – 5 million pounds last year.

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About Modern Corporation:

Modern Corporation is a group of companies specializing in state-of-the-art solid waste management and innovative sustainable environmental practices. Modern has more than 500 employees in New York as well as Southern Ontario, Canada.

About NYSERDA:

NYSERDA, a public benefit corporation, offers objective information and analysis, innovative programs, technical expertise and funding to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce their reliance on fossil fuels. NYSERDA professionals work to protect our environment and create clean-energy jobs. NYSERDA has been developing partnerships to advance innovative energy solutions in New York since 1975.

Last Updated: 05/14/2013

Contact(s)

- **Alan Wechsler, Communications Specialist**
  Phone : 518-862-1090, Ext. 3561
  Email : anw@nyserda.ny.gov

West Seneca Bee

2011-10-27 / Business

Waste Management debuts natural gas fueling station, $15M 'go green' initiative

by KIMBERLY MCDOWELL Editor

Waste Management's Brian Holtz, group fleet director for East Fleet and Logistics, demonstrates the new compressed natural gas fueling station recently installed at the company's Ransier Drive location in West Seneca. This is Waste Management's first public-access station and part of its long-term endeavor to become more environmentally friendly. Photo by Scott SchildPurchase color photos at www.BeeNews.com

Waste Management is taking proactive measures to ensure that it lives up to its name, to manage or control the amount of waste it leaves behind.

The company unveiled its latest "go green" initiative, which is a compressed natural gas fueling station at its West Seneca location, inside the Industrial Park off North America Drive.

This public-access CNG fueling station is the first of its kind in Western New York, though Waste Management has opened about 20 others throughout the country.

At a press conference held last week, the company debuted its $3 million natural gas fueling station as well as its $12 million intention to convert its regional fleet to this new, environmentally-friendly fuel source.

CNG is said to be an economical and clean-burning alternative fuel source for vehicles, ultimately reducing the amount of toxic emissions into the air.

Dave Balbierz, area vice president for Waste Management, said that they are in the process of transitioning 80 percent of its fleet — approximately 18,000 vehicles — from diesel to natural gas. This would be at a cost of more than $300,000 per truck.

For every truck that is converted, the usage of diesel fuel is reduced by an average of about 8,000 gallons per year.

The company recently acquired 25 CNG trucks and expects to have 40 CNG vehicles in service by next year, representing half of its West Seneca-based fleet. These vehicles cover routes in Erie and Niagara counties.

Added benefits are that natural gas trucks are quieter, easier to maintain, and the CNG fuel costs one-third less than diesel.

"Over the next decade, Waste Management will spend up to $500 million per year in capital on our fleet and heavy equipment," Balbierz said, adding that the spending is designed to "increase the fuel efficiency of our fleet by 15 percent and reduce our emissions by 15 percent by 2020."

A ribbon-cutting ceremony on Oct. 20 marked the debut of Waste Management's fueling station. This was attended by West Seneca Supervisor Wallace C. Piotrowski as well as other elected officials, such as State Sen. Mark Grisanti and County Executive Chris Collins who declared it "Waste Management Day."

"First means you're being proactive — not reactive," Collins said before presenting the company with a proclamation.

The self-service station will be open 24 hours each day, seven days per week, and accepts Visa, MasterCard, Wright Express Universal cards, and Clean N' Green fleet cards.

Return to top

[redacted]

FOR IMMEDIATE RELEASE:
For further information contact:

January 2, 2014
Don Dimitroff, 716.208.1814
dcdimitroff@sonwil.com

Sonwil Distribution Center Enhances Transportation Fleet with CNG Trucks

Move reinforces commitment to alternative fuels, clean vehicle technology, and sustainability.

(BUFFALO, N.Y.) – Today Sonwil Distribution Center—Western New York's premier logistics solutions provider—announced the addition of several Kenworth Compressed Natural Gas (CNG) tractors to its overall transportation fleet. These CNG tractors, operating under Sonwil's Innovative Transportation Services affiliate, yield fewer emissions and deliver greater fuel economy/cost savings in comparison to traditional diesel trucks.

"Alternative fuel and clean vehicle technology is the future of the logistics industry," said Peter Wilson, CEO and President of Sonwil Distribution Center. "The decision to transition Sonwil's fleet towards natural gas is a component of our larger company-wide transportation strategy that focuses on continuous efficiency improvement, cost control, and operational and environmental sustainability."

Four Sonwil CNG tractors are now on the road with plans for additional trucks to be commissioned in the near future. More specifically, as new equipment is added and further fleet turnover occurs, it will allow for the conversion of existing tractors to CNG.

Sonwil anticipates the return on investment for the four new CNG tractors to be between 18 and 24 months, depending on the mileage attained by each tractor during that period. The CNG trucks are able to handle 102,000 Gross Vehicle Weight combinations.

About Sonwil Distribution Center:

Sonwil Distribution Center, Inc., is a family-owned and operated logistics solutions firm located in Western New York which has been serving regional, national, and international clients for more than 65 years. The company provides reliable services that free customers from their operating

[redacted]

expenses and the management issues related to private facility ownership. Sonwil's scalable logistics solutions help clients optimize revenue growth and reduce their operating expenses related to the management and distribution of their inventory by offering logistics to power distribution, transportation to move goods, and commercial space to grow your business.

To learn more about Sonwil Distribution Center, please visit **www.sonwil.com**.

(Caption) New Sonwil (Kenworth T660) Compressed Natural Gas Tractor featuring GCW 107,000 lbs. hauling capacity, a Cummins ISX 12 G / liter 2013 400 HP, a Fuller FRO 16210C 10 speed transmission, a Tandem Kenworth Airglide 460 46K rear suspension, and Agility 155 DGE (Diesel Gallon Equivalent) tanks.

###

Sonwil Distribution Center, Inc.
10 Sonwil Drive, Buffalo, NY 14225
Phone: 716.684.0555
□ http://www.sonwil.com □

From the Business First
:http://www.bizjournals.com/buffalo/print-edition/2013/05/10/try-it-will-fuel-fleet-with-compressed.html

SUBSCRIBER CONTENT: May 10, 2013, 6:00am EDT

Try-It will fuel fleet with compressed natural gas

David Bertola
Buffalo Business First Reporter- *Business First*
Email | Twitter | Google+

As part of a $6 million project, **Try-It Distributing Co.** Inc. is converting 45 diesel trucks to compressed natural gas and building a CNG filling station at headquarters in Lancaster.

The company leases its fleet, which is comprised of various-sized trucks.

Jeff Gicewicz, vice president of corporate holdings, said the lease for the fleet expires in September. The plan is to convert the trucks in phases, beginning this fall.

"I would expect the first batch of five to eight trucks will arrive, then a few weeks later, we'll get a second batch," he said. "This won't take years to complete."

But the trucks need somewhere to fuel up. So Try-It, the world's largest distributor of **Labatt** beer, must wait until the CNG filling station is constructed. Plans are to begin this summer and finish by year-end.

Gicewicz said Try-It will work with Cobey Inc., a Buffalo gas compression company that makes fueling station equipment. On April 22, Cobey unveiled CNG filling station products at an open house.

"Through some informational seminars, I became acquainted with Craig Jackson (Cobey business development manager). We list them as our preferred provider of equipment in our RFP, and it was our preference that we ended up with their equipment," he said. "It's peace of mind for us to have the equipment manufacturer be 20 minutes away from us."

In 2010, Cobey started exploring CNG for passenger vehicles. The goal was to provide equipment for CNG filling stations within a 500-mile radius of Buffalo.

Natural gas costs less than diesel and Try-It wanted to be at the forefront of CNG conversion. Locally, **Waste Management Inc.** and **Modern Corp.** have made similar fleet conversions.

Gicewicz said Try-It is opening the filling station to the public because that plan helped secure $1 million in incentives from NYSERDA for the project. Besides the grant, the balance would be paid in cash toward the truck leases.

"Although it wasn't a prerequisite for NYSERDA, we thought it would have increased our chances of receiving the funding if we had a public component to it," he said.

David Bertola covers small business, energy and marketing

NYSERDA - Energy. Innovation. Solutions.

Try-It Distributing Unveils New CNG Fleet and Filling Station; Project is One of the Largest Private CNG Fleets in New York State

December 18, 2013

Try-It Distributing Co., Inc. today (December 18, 2013) launched its new fleet of 43 delivery trucks powered by compressed natural gas (CNG) and, in partnership with American Natural Gas (ANG), opened a CNG filling stationaccessible to the public in front of Try-It's headquarters building, 4155 Walden Avenue, Lancaster, NY.

The beverage distribution company, founded in 1928, hosted a ribbon-cutting ceremony to mark its shift from diesel fuel to domestic natural gas resources.Try-It was awarded $1 million by the New York State Energy Research and Development Authority (NYSERDA) through Gov. Andrew M. Cuomo's Regional Council initiative. NYSERDA funding will cover a portion of the cost to lease the CNG vehicles.

Paul Vukelic, Try-It's President and COO, said: "The Try-It Family and our stakeholders are excited about the significant environmental benefit of this effortthat uses an abundant domestic resource. Try-It'sproject is expected to reduce greenhouse gas emissionsby 390 tons annually – equivalent to taking 80 cars off the road. Our company is among the first large beverage distributors in the nation to convert its fleet."

He added: "With the help of our partners, ANG and NYSERDA, we are expanding the clean and alternative energy infrastructure in Western New York, reducing our operating costs, and will continue to promote our energy independence. We could not be more proud."

Drew West, ANG Founder and CEO, said: "American Natural Gas is pleased to partner with Try-It Distributing in its efforts to convert its fleet to a clean and domestic alternative fuel. The Try-It facility is an example of our commitment to providing world class, publicly accessible CNG infrastructure capable of accommodating all vehicle sizes. ANG looks forward to providing premier fueling services to Try-It Distributing and its subsidiaries, allowing them to operate a significantly cleaner and more cost effective delivery fleet."

The CNG filling station is owned and operated by American Natural Gas. It is able to fuel all CNG-powered vehicles – from tractor-trailers to consumer-owned cars. The initial fuel price is $2.19 per unit of GGE (Gasoline Gallon Equivalent). Vukelic noted that automakers including Chevrolet, Ford, Dodge and Honda are entering the CNG market with various models of cars, vans and pickup trucks. "This signals a whole new world of energy possibilities, " he said.

"Try-It Distributing's commitment to using a cleaner, alternative fuel is an example of how the transportation sector can have far-reaching impacts on New York's economic and environmental well-being," said John B. Rhodes, President and CEO, NYSERDA. "This project highlights how the State, under Governor Cuomo, continues its investment in projects that stimulate the clean-energy economyand help businesses reduce their operating expenses."

NYSERDA's $1 million in funding for this project is made possible through the Regional Greenhouse Gas Initiative (RGGI), a cap-and-trade program to reduce greenhouse gas emissions. New York State's proceeds from RGGI support the State's efforts to reduce carbon dioxide emissions through energy efficiency, renewable energy and carbon abatement technology.

Howard A. Zemsky, Managing Partner at Larkin Development Group and Regional Economic Development Council (REDC) Co-Chair, said: "I commend Try-It for its investment in this project, which will be instrumental in furthering the region's sustainability efforts. Projects like this one bolster the State's clean-energy infrastructure and can provide all New Yorkers with a cleaner environment." "Try-It Distributing is a forward-thinking company that emphasizes environmental stewardship as part of its corporate philosophy, " said Satish K. Tripathi, President of the University at Buffalo, and REDC Co-Chair."Try-It is a leader in Western New York and serves as a model for other companies seeking to reduce their carbon footprint, which is essential for long-term economic security and protection of New York's environment."

Senator Patrick M. Gallivan (R-C-I), Elma), deputy Republican Conference Leader for Economic Development, said: "For over 80 years, Try-It Distributing has been a recognized leader in innovation within the beverage distribution industry locally, regionally and across the nation. That record of accomplishment continues today, as it converts its fleet to compressed natural gas, an environmentally friendly and energy efficient alternative fuel. I congratulate Try-It, the Vukelic Family and Try-It's hundreds of employees in Lancaster and across the State."

Assemblyman Dennis Gabryszak (D, Cheektowaga) said: "It is great to see that Try-It is able to adopt CNG technology that will reduce the cost to fuel their fleet while being friendlier to the environment. I am hopeful that NYSERDA will continue to enable other area businesses to do the same in the months and years ahead."

Last Updated: *12/18/2013*

Contact(s)

- **Tricia E. King, Communications Liaison**
  Phone : 518-862-1090, Ext. 3479
  Email : tek@nyserda.ny.gov

From the Buffalo Business First:
http://www.bizjournals.com/buffalo/news/2015/09/01/seven-companies-team-to-build-2-9m-cng-station-in.html

Seven companies team to build $2.9M CNG station in Tonawanda

Sep 1, 2015, 12:00pm EDT

Nexus Natural Gas LLC, a consortium of seven regional companies, today unveiled the first collaborative, public compressed natural gas fueling station in Erie County.

The $2.9 million station, to be located at 380 Grand Island Blvd. in Tonawanda, will be open 24-hours-a-day, seven-days-a-week. Drivers of CNG powered vehicles can fuel up in a self-serve manner with credit and fleet card payment methods.

The project was supported by a $570,000 New York Power Authority grant.

The consortium is comprised of Triad Recycling and Energy Corp., Guard Contracting Corp., Speed Global Services, Niagara Metals LLC, The Pariso Cos., O&K Truck Repairs Ltd. and Swift River Associates Inc. The fueling station

was opened in partnership with Clean Communities of Western New York, Cobey Energy Inc. and National Fuel.

"Our consortium is comprised of forward looking transportation companies and we believe that converting transportation fleets to compressed natural makes sense economically but also environmentally," said John Hannon, a partner at Triad.

Hannon said that it was necessary to create the station and locate it in Tonawanda because of trucking volume around the River Road area, where consortium member businesses are located. The member companies, he said, have about 150 trucks among them. Of these, approximately 28 will be converted to compressed natural gas by the end of the year.

He listed a steady supply of domestic fuel, which results in consistent pricing. Burning a cleaner, more eco-friendly fuel, are other advantages that result in trucks lasting a longer.

"The long vision is to build a station and over the long run, know that we have a domestic energy source will make us competitive," he said.

The Later this week, Tops Markets LLC will open its CNG station. Niagara Frontier Transportation Authority broke ground on their $5.9 million CNG station on Aug. 31.

According to Nexus Natural Gas, compressed natural gas fuel can be used only by CNG-specified vehicles, including light-duty trucks and sedans, taxi cabs, medium-sized trucks, heavy-duty trucks, UPS delivery vans and buses.

"Natural gas offers many advantages over conventional petroleum products, and is produced here in the United States," said Anna Marie Cellino, President of National Fuel Gas Distribution Corporation. "Compressed natural gas is the smart and affordable choice for fleet vehicles, transit buses, school buses, waste disposal trucks, delivery vehicles and more. We are excited to be a part of

this initiative that makes this alternative energy source readily available throughout our region."

According to a statement by Nexus, 34 U.S. states have at least one public natural gas fueling site, and there are 40 CNG stations in New York State. The U.S. Department of Energy refers to compressed natural gas as a renewable, domestically-produced alternative fuel that increases energy security due to its abundance in the U.S. Compared with conventional forms of fuel like diesel and gasoline, compressed natural gas produces fewer emissions and contains less pollutants.

David Bertola
Reporter
Buffalo Business First

A NFTA Metro bus makes its way toward downtown Buffalo. The Niagara Frontier Transportation Authority plans to begin converting its Metro Bus fleet from diesel to compressed natural gas. Robert Kirkham/Buffalo News

Buses' diesel blasts en route to being relegated to the past

Shift to natural gas in NFTA's fall plans

BY: T.J. Pignataro (mailto:tpignataro@buffnews.com)

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Imagine stepping off a Metro bus without being blasted moments later by a heated cloud of dark, noxious diesel exhaust.

The experience is coming to Buffalo this fall.

The Niagara Frontier Transportation Authority is changing 44 of its oldest full-size buses – nearly 15 percent of its Metro Bus fleet – and 10 more of its paratransit vans from diesel to compressed natural gas.

The NFTA is scheduled to break ground Monday on construction of a $5.9 million high-capacity, fast-fill CNG fueling station at Metro's Frontier Bus Garage on Military Road in Buffalo. With that will also come 54 brand-new Empire State-built buses and vans.

The first-of-its-kind move for the NFTA in the Buffalo Niagara region is designed to be cost-conscious as well as environmentally and user-friendly.

Fuel costs for those bus routes are forecast to decrease by at least one-third, NFTA officials said. And upward of 1,300 tons of carbon will be kept out of the region's air over the next 12 to 15 years.

"Compressed natural gas is the fuel of the future for our fleet of buses," said Kimberley A. Minkel, the NFTA's executive director. "It's affordable, plentiful, safe and 'Made in the USA.' "

The NFTA is partnering with Trillium CNG, a Chicago-based natural gas fueling station design and construction firm. Ninety-nine percent of the natural gas fueling the new buses will be North American sourced, transit officials said.

The average rider won't notice much difference with the new CNG buses from the NFTA's existing hybrid models, according to Thomas George, the agency's director of public transit.

"A clean, fresh bus smell," George said.

Riders on those last-remaining older diesel model buses, however, will experience a smoother, odorless ride aboard a CNG bus, officials said.

The 44 full-size buses are being manufactured for the NFTA by Plattsburgh-based Nova Bus and the 10 paratransit vans are being assembled by Shepard Bros. in Canandaigua. The first 20 are scheduled to roll out onto the streets later this fall, with the remaining two dozen coming in 2016. The vans will hit area streets this fall, officials said.

NFTA officials are confident that CNG buses have "safety advantages" over diesel-powered buses.

The natural gas fuel cylinders will be housed on top of the buses, reducing the threat of being ruptured during an accident. Other safety redundancies are also built into the units, such as specialized leak-detection systems, which would allow bus drivers to shut down and evacuate a bus well in advance of any threat to passengers, NFTA officials explained.

Public buses in other places around the globe have long been using natural gas as a fuel.

Larger cities across the nation – including New York City, Los Angeles and Fort Worth, Texas – also changed to natural gas bus fleets over the last couple of decades

Fort Worth was one of the first in the U.S. back in the late 1980s, and they haven't looked back.

"From a public standpoint, The T (Fort Worth Transportation Authority) has had very favorable comments regarding the fact that the CNG emissions are environmentally clean, colorless and odorless with no particulate matter," said Ron Anderson, assistant vice president of maintenance for the Fort Worth Transportation Authority. "Because they do not create smelly fumes, it is not even noticeable that one is standing near or riding behind a bus."

In smog-ridden Southern California, Metro – the Los Angeles County Metropolitan Transportation Authority – was also an early CNG convert. Four years ago, Metro's last diesel bus in its fleet of more than 2,200 was retired.

"The decision was entirely environmental," said Paul Gonzales, Metro's senior media relations officer told the Buffalo News on Friday. "CNG vehicles cost more and, at the time the decision was made, the fuel cost difference was not as significant as it is currently."

Many others not as far from Buffalo are also following suit, press reports from the region show. Cleveland launched a new fleet of 60 CNG buses in May, with more coming next year. Erie, Pa., made the change in some of its bus fleet a couple of years ago. And, Pittsburgh announced a plan earlier this year to begin a four-year process of switching from diesel-powered public buses to natural gas.

George said local officials consulted with Centro, the Central New York Regional Transportation Authority based in Syracuse, which put its first of 120 CNG buses on the street in 1994 and, according to its website, is converting its fleet to "hybrid technology." The NFTA also consulted with the Massachusetts Bay Transportation Authority, as well as visiting other transportation fleets in Pennsylvania in its planning stages for Buffalo's CNG operation, George said.

Of the nearly $6 million project price tag, the NFTA will pick up $5 million of the tab for Buffalo's conversion. Other funding sources are coming from the Federal Transit Administration, $575,112; National Fuel, $301,312; and the state Department of Transportation, $68,653.

George said the NFTA began pursuing a natural gas fleet about four years ago for budgetary reasons, seeking a prospective measure to cut fuel costs for the wildly unpredictable price of diesel.

The collateral benefits to the environment and public health, however, are what some contend are even more important.

"It's cleaner air for not just those riding the buses, but for the communities it's serving," said Michael Seilback, vice president for public policy and communications for the American Lung Association of the Northeast.

Seilback pointed out Erie County logged a 'D' rating in the association's most recent State of the Air report for ozone pollution. Although there are many sources, vehicle exhaust – particularly from old, dirty diesel engines – is a big one, he said.

"Certainly, buses that are running on natural gas are leaps and bounds cleaner than some of the old dirty engines," Seilback said. "We want to see our state and local authorities lead the way and show that it matters, so we're glad to see it."

George pointed out the NFTA took a big step in cleaning the air with the diesel-hybrid model buses that comprise most of the current fleet. CNG buses takes that a step further.

An average NFTA Metro Bus gets an average of about 4.5 miles per gallon of diesel fuel and travels about 350 miles every day. It has a 12 year "useful life span" that the NFTA typically pushes to about 14-15 years. Officials said the oldest buses on the roads today – the one's being replaced – are from 1996.

By comparison, a full tank of CNG will get the new NFTA buses comparable range without the pollution, officials said. It's estimated that the new buses will also enjoy a roughly 12-year lifespan.

An NFTA graphics packet announcing the CNG transition hails natural gas as the best burning of fossil fuels "leaving mostly carbon dioxide and water behind – just like us."

But, that's only if all of the natural gas is consumed by combustion and none leaks into the atmosphere.

Methane, which natural gas is mostly comprised of, is actually 25 times more powerful as a greenhouse gas than carbon dioxide over a 100-year period, according to the U.S. Environmental Protection Agency.

NFTA officials are confident, however, state-of-the-art equipment will insure there are no unintended gas releases from either the vehicles or the pumping stations.

"It's as close as you can get to an ecofriendly, environmentally friendly vehicle," said C. Douglas Hartmayer, NFTA spokesman.

email: tpignataro@buffnews.com

T.J. Pignataro

From the Buffalo Business First:
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Tops , NFTA moving forward with CNG fleet conversions

Sep 2, 2015, 3:30pm EDT

A grand opening of a new compressed natural gas fueling station started **Tops Markets LLC** conversion to run trucks on the clean-burning fuel.

Tops is in the process of replacing its 55 tractor-trailer trucks with those that are CNG compatible.

The station and fleet conversion is part of a six-year, $16 million project.

By the end of next month, Tops will have replaced its 55 tractor-trailer trucks with those that are CNG compatible. The change is made possible through a partnership with Ryder (NYSE: R) and American Natural Gas LLC, which designs and builds CNG stations.

ANG developed a CNG fueling facility on-site at Tops' distribution center, which employs 765 and is located at 5873 Genesee Street.

American Natural Gas CEO Andrew West said that the Saratoga Springs -based company wants to focus its efforts mainly on designing, building, owning, operating and maintaining natural gas fueling stations within New York state.

Ron Ferri, Tops senior vice president of distribution and logistics, said that additional tractors could be added next year, and that Tops selected ANG because of that company's track record of working in cold climates. When researching the diesel fuel alternative, Ferri met with **Try-It Distributing Inc.**, which in December launched its fleet of 43 CNG-powered trucks.

"They were instrumental in helping us learn about the process," Ferri said.

Tops, which operates 164 full-service supermarkets, recently opened a store in Fulton, near Syracuse, and will open one in Farmington, outside Rochester, later this year. Company officials said there are plans to open four supermarkets next year, but that the sites haven't yet been determined. The company buys 1.2 million gallons of diesel fuel per year and will save about 50 percent in annual fuel costs by switching to CNG.

Meanwhile, the **Niagara Frontier Transportation Authority** broke ground on its CNG fueling statio n on Aug. 31.

The transit agency has ordered 44 full-size buses from Nova Bus that will run on compressed natural gas. The first 20 are due later this year, and will begin transporting passengers at that time, with the remaining 24 to follow in 2016. The new buses will replace the oldest diesel buses that currently are in use. Metro has also ordered 10 CNG para-transit vans from Shepard Brothers, which will be used to transport customers with special needs. The vans will begin service this fall.

Based on price fluctuations, NFTA officials said that the facility could pay for itself within three to five years, and save approximately $26 million over a 12-to-14 year period with 100 buses using CNG.

"CNG will be our fuel of the future for our fleet of buses," said NFTA spokesman C. Douglas Hartmayer. "It's affordable, plentiful, safe and made in the United States."

Hartmayer said that the NFTA had considered opening the facility to the public, but with the location behind the Frontier bus garage in Tonawanda, it was decided that doing so wouldn't be feasible.

"We considered it initially, but based on the location of the fueling facility, which is behind the station where the buses have to pass through to get to fueling terminals, it was discounted for security and logistical reasons," he said.

David Bertola
Reporter
Buffalo Business First

Compressed natural gas pumps to open at two locations

Tops to convert fleet, public facility to open

BY: Samantha Christmann (mailto:schristmann@buffnews.com) Published: August 31, 2015, 03:19 PM
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Two compressed natural gas fueling stations are coming to Western New York.

Tops Markets will open a $2 million station at its Lancaster distribution facility, 5873 Genesee St., on Wednesday and begin converting its 55-truck commercial fleet to run on compressed natural gas. It expects switching to CNG and using more efficient trucks will save the company 1.2 million gallons of diesel fuel per year and cut its fuel costs by more than half.

The fueling facility was developed by Saratoga Springs-based American Natural Gas. National Fuel Gas Co. lent Tops $375,000 to buy down upfront costs. Tops' trucks, which are leased through Ryder, cost $14 million.

Meanwhile, Nexus Natural Gas will cut the ribbon on a $2.85 million public fueling station Tuesday at 380 Grand Island Blvd. in the Town of Tonawanda. It will be open to both consumer and commercial vehicles.

Nexus is a consortium of seven companies in the Town of Tonawanda including Triad Recycling and Energy, Guard Contracting Corp., Speed Global Services, Niagara Metals, the Pariso Cos., O&K Truck Repairs and Swift River Associates.

Nexus received a $570,000 grant to help fund the station's construction, which allowed the group to convert its 24-truck member fleet to run on CNG. The station was developed in partnership with Clean Communities of Western New York, Cobey Energy and National Fuel.

Natural gas has to be compressed to about 4,000 pounds per square inch in order to load enough fuel into a gas tank and make a natural gas vehicle practical. Once compressed, the gas is stored in horizontal steel tubes and dispensed from pumps that look much like traditional gasoline pumps. CNG vehicles have a heavier-duty cylinder than a diesel engine so it can handle the higher pressure. Aside from modifications to the fuel intake system and fuel tank, the vehicles works the same as a diesel-fueled vehicle.

email: schristmann@buffnews.com

Samantha Christmann