NGV Journal US     2016     JUNE

MARKETS & MORE

Galileo Technologies’ Virtual Pipeline supplies NYC drink company

Cross-country rally educates on the benefits of natural gas vehicles

Canada: Ontario’s new Climate Change Action Plan features CNG and biogas

More companies are deploying LNG-powered vessels and plan to convert their entire fleets in the future.

LNG adoption, a reality in North American shipping industry

San Francisco waste company deploys NGV fleet and RNG stations

NGVamerica & SWANA develop best practices for CNG refuse trucks

Hydrogen fuel cell mobility gains momentum in Californian public fleets

NGVJournal.US is a publication of AltFuels Communications Group, a publishing house and fairs-conferences organizer, which reaches the whole world with its reactive online solutions and four magazines that reach the whole world (with their respective online versions): GNV Latinoamérica, Asian NGV, NGV America & SWANA.

Hydrogen fuel cell mobility gains momentum in Californian public fleets

Canada: Ontario’s new Climate Change Action Plan features CNG and biogas
The latest and most important news of the European NGV market

You cannot miss it!

Reserve your space at info@thegvr.com

www.ngvjournal.com
#20 Summary

JUNE 2016

LNG adoption, a reality in North American shipping industry

Ontario unveils climate change plan featuring NGVs

San Francisco big project features truck fleet conversion and RNG stations

NGV America develops best practices for CNG refuse trucks

Hydrogen mobility gains momentum in California

Galileo’s Virtual Pipeline supplies NYC drink company

New launchings help pave the way for a robust NGV industry

San Francisco fuel cell electric vehicles at the forefront

Plans underway to develop world’s first plug-in hybrid electric minivan

Chicago bakery achieves notable petroleum displacement with Autogas fleet

NGV Journal US is a publication of AltFuels Communications Group, a publishinghouse and fairs-conferences organizer, which exclusively covers the NGV market in the United States and Canada. In addition to NGV Journal US, AltFuels has four magazines that reach the whole world (with their respective online versions): GNV Latino América, Asian NGV Communications (Asia-Pacific Region), The Gas Vehicles Report (Europe), and Prensa Vehicular (Argentina). The group as a whole has the website www.ngvjournal.com as its main channel. From there, the company creates its current products and outlines the future. Contact us: sales@ngvjournal.us | Tel: +39-335-189-3249

The signed articles are exclusive responsibility of the authors, as well as advertising companies and agencies are responsible for the published ads.
Harvey Gulf to establish itself as a leader in utilizing LNG as a marine fuel."

The ‘Harvey Liberty’, built by the Gulf Coast Shipyard in Mississippi, runs on 99% LNG fuel and can operate for up to 15 days before refueling. The LNG powered vessels provide vessel owners an alternative fuel to meet sulphur and nitrogen oxide emissions regulations in the North American Emission Control Area (ECA).

It is 302 feet long and operates on three dual-fuel Wärtsilä engines. It will load from Harvey Gulf’s new LNG bunkering facility in Port Fourchon, Louisiana where it will support Shell’s platforms in the Gulf of Mexico, transporting supplies, equipment, and drilling fluids.

In January 2016, Harvey Gulf International Marine opened the first marine LNG fueling terminal in North America, and completed a transfer of approximately 43,000 gallons of Harvey Gulf to establish itself as a leader in utilizing LNG as a marine fuel."

Shell’s OSV

Shell Offshore Inc. (Shell) marked the delivery of the third LNG powered Offshore Supply Vessel (OSV) in Port Fourchon, Louisiana. The ‘Harvey Liberty,’ chartered from specialist company Harvey Gulf International Marine, will join her sister ships, the ‘Harvey Energy’ and ‘Harvey Power’, and support Shell’s deep-water operations in the Gulf of Mexico.

“This is an important milestone for Shell and Harvey Gulf,” said Tahir Faruqui, Shell’s General Manager LNG North America. “The ‘Harvey Liberty’ highlights our efforts to grow LNG as a fuel in the transport sector, and is a welcome addition to our portfolio.” Harvey Gulf International Marine’s CEO and Chairman, Shane Guidry, added: “Harvey Gulf is excited to share these historical maritime events with Shell. This represents another significant step in the path for

Companies are deploying more LNG-fueled vessels and plan to convert their entire fleets in the future to meet stringent emission regulations. Bunkering infrastructure is also under construction to satisfy the potential growing demand.
NGV Journal US     2016     June

LNG to the ‘Harvey Energy,’ the first Harvey Gulf vessel powered by LNG to support Shell’s Gulf of Mexico operations.

All three vessels will meet the stringent requirements of the ABS “ENVIRO+, Green Passport” notation, making them some of the most environmentally friendly Offshore Supply Vessels in Gulf of Mexico.

NASSCO’s ECO Class tanker

On Thursday, May 26, General Dynamics NASSCO hosted a keel laying ceremony for the Liberty, one of three ECO Class tankers under the same construction contract with SEA-Vista LLC, a partnership between SEACOR Holdings, Inc. and Avista Capital Partners. As honorees, Tom Denning, Ed Hoffman, and Tom Sofyanos—all representatives of SEA-Vista LLC—welded their initials into the keel of the ship.

The Liberty is a 610-foot, 50,000 deadweight-ton, LNG-conversion-ready product tanker with a 330,000 barrel cargo capacity. The new ECO Class design symbolizes the emerging direction of the shipping industry in the U.S. toward cleaner, more fuel-efficient modes of transporting product. Once delivered, the tanker will be operated by Seabulk Tankers, Inc.

The construction and operation of the new ECO Class tankers are aligned with the Jones Act, requiring that ships carrying cargo between U.S. ports be built in U.S. shipyards. Construction on the Liberty began in October 2015.

As a complement to its government new construction and repair business segment, NASSCO has extensive experience in commercial shipbuilding. In the past decade, NASSCO delivered 16 commercial ships—including the world’s first LNG-powered containerships.

BC Ferries’ ships

BC Ferries has held the official naming ceremony for the Salish Eagle and the Salish Raven—two 107 m long ferries, each capable of carrying 145 vehicles and 600 passengers and crew. Both vessels feature dual-fuel engines, capable of operating on both LNG and ultra-low sulfur diesel. Each vessel has two car decks and an estimated service life of approximately 40 yr.

The vessel sponsors for the Salish Eagle and the Salish Raven are Michelle Letourneau (currently serving as a master on the routes serving the Southern Gulf Islands) and Jodi Gaudet (currently serving as the Chief Engineer on the MV Quinsam, which operates on the route between Nanaimo and Gabriola).

The President and CEO of BC Ferries, Mike Corrigan, said: “This ceremony marks a major milestone in the construction of our three new Salish-Class vessels as they each take another step closer to entering our fleet.

“These vessels, named after the Coast Salish people and the Salish Sea, represent British Columbia’s rich coastal culture and heritage, and will serve coastal communities for many years to come.”

By utilizing natural gas as fuel, the vessels will be able reduce CO2 emissions by approximately 9000 tpy, which is equivalent to removing 1900 passengers vehicles off of the road each year.

The Salish Eagle and the Salish Raven are the second and third of the Salish-Class series of vessels. The first—the Salish Orca— is scheduled to arrive in British Columbia (B.C.), Canada, by the end of 2016. The Salish Eagle and the Salish Raven, meanwhile, are scheduled to arrive in early 2017 and the spring of 2017, respectively. All three of the vessels are expected to commence operation by the summer of 2017.

The Salish Orca will operate on the Comox-Powell route, whilst the Salish Eagle and Salish Raven will serve the Southern Gulf Islands.

Hawaii strengthens commitment to LNG adoption

Clean Energy Fuels Corp. announced that it has secured a contract to provide LNG to Hawaii Gas, the State of Hawaii’s only franchised gas utility. The agreement is consistent with the state’s intent to reduce its reliance on imported crude oil, using a cleaner and more economical fuel.

“Hawaii Gas has been serving the state for over a hundred years and is committed to providing our customers with quality and reliable gas service,” said Thomas Young, Hawaii Gas’s Executive Vice President and Chief Operating Officer. “With Clean Energy LNG, we will be able to diversify our gas supply using a clean fuel improving our reliability and maintaining the quality of service our customers know us for.”

Moreover, Clean Energy announced that it has extended its LNG supply agreement with the City of Phoenix. The two-year contract extension is for an estimated 5 million gasoline gallon equivalents (GGEs) per year and is valued at over $10 million. Clean Energy has supplied the City with LNG for over a decade.

“The City of Phoenix recognizes what Clean Energy brings to the table,” said Transit Director, Maria Hyatt. “We are committed to ensuring we provide a clean, affordable transportation solution to our riders and feel confident Clean Energy will help us meet that goal.”
LNG plant for Crowley

Eagle LNG announced it has begun the construction process for a natural gas liquefaction plant in West Jacksonville, FL. The state-of-the-art facility is slated to be operational and producing high-quality LNG by early 2017. It will have a capacity of 200,000 gallons per day (87,000 gallons per day initially). It will supply LNG to Crowley to be used in their new LNG-powered Commitment Class ships for U.S. mainland to Puerto Rico trade.

“This project represents another example of how our customer-first approach, unmatched industry experience, and an innovative vision is helping our clients meet their fueling and environmental needs,” said Dick Brown, CEO, Eagle LNG. “LNG produces fewer emissions and is an overall cleaner fuel than sources like diesel and heavy fuel oil, which helps companies improve sustainability efforts and meet regulatory mandates within a sound economic framework.”

“This is a very important development for Crowley and for the Northeast Florida region as a whole,” said John Hourihan, Crowley senior vice president and general manager, Puerto Rico services. “Having reliable access to sufficient quantities of LNG will be essential to our operations as we introduce our new LNG powered Commitment-Class ConRo ships to the Puerto Rico market next year. The facility will also afford us the opportunity to export LNG in ISO tanks to customers in Puerto Rico and the rest of the Caribbean Basin, something we are already doing with LNG sourced from outside of Florida.”

The LNG plant features a 1,000,000-gallon storage tank and an LNG truck loading system. The LNG plant is also designed to load LNG ISO containers for supply to nearby island markets. This is a distinct project from the previously announced Eagle LNG Federal Energy Regulatory Commission (FERC) export terminal located along the St. Johns River, in Jacksonville.

To support fueling ships, Eagle LNG is building a fuel depot dockside at the Talleyrand Marine Terminal on the St. Johns River. The marine terminal, which uses customized design technology, operates within a small footprint for bunkering operations.

LNG bunker training for TOTE

GTT subsidiaries, GTT North America, Inc. and GTT Training Ltd, announced the award of the first contract of its kind for the development and implementation of a comprehensive LNG training program for the 2,200 m3 LNG Bunker Barge currently under construction at Conrad Industries Shipyard in Orange, TX, following the order received by GTT North America from Conrad Industries in February 2015. The contract was executed with the barge’s owner TOTE on April 6th 2016, to initiate the program for training of the tug and LNG barge crew, which will ultimately be subject to U.S. Coast Guard approval.

At present, there are no LNG specific competency and training standards for LNG barges that can serve as the basis to establish crew credentials and qualifications by the Flag authorities. GTT North America will collaborate with its sister company, GTT Training, STAR Center, an internationally recognized and U.S.C.G. accredited LNG training center located near Miami, Fl, and TOTE to fully develop the training program and obtain the necessary approval from U.S.C.G.

“We are excited to partner with GTT and other stakeholders in developing a training program that sets the standard for safety when working with LNG,” said Peter Keller, Executive Vice President of TOTE.

“We are proud and honored by this agreement with TOTE. It demonstrates GTT group’s capability to provide TOTE a wide range of services, beyond the containment system technology, to assure their personnel are certified and competent to safely conduct all operations related to the LNG bunker barge,” added Philippe Berterottière, CEO of GTT.
Now, LNG can drive your projects

The Cryobox® Nano LNG-Station is a fuel producing unit that can be delivered in a single truck to offer 10k gallons of LNG per day. Its plug-and-play and redeployable configuration works within a wide range of inlet pressures of natural gas, from both —commercial pipelines and associated gas wells. This unmatched alternative ensures a clean fueling solution wherever needed.

Call us at +54 11 4712-8000 or follow us on:
www.galileoar.com
Galileo’s Virtual Pipeline supplies NYC drink company

Mobile Fueling Solutions uses Galileo’s technology to refuel a fleet of 25 natural gas trucks of one of the main beverage distributors in Metro New York. The Virtual Pipeline features a VST-2™ trailer, equipped with a CNG container that houses a hydraulic compressor and a dispenser.
With compressed natural gas delivered by using the Virtual Pipeline™ technology developed by Galileo Technologies, Mobile Fueling Solutions (MFS) refuels with 25 tractors of Manhattan Beer Distributors (MBD), one of the main beverage distributors in Metro New York.

“Simply not having our drivers drive off-route to fuel our tractors is a great convenience for us, and MFS has been reliable and professional from the start,” said Juan Corcino, Manhattan Beer Fleet Manager in the last MFS release.

“The main advantage of our Virtual Pipeline relies on its VST-2™ trailer, which is equipped with a CNG container that houses a hydraulic compressor and a dispenser. This feature allows the trailer to run as a mobile station with a fuel stock of CNG higher than 700 gasoline gallon equivalents (GGE) [about 2500 cubic meters (m3)]”, explained Luis Pereira, President of MFS.

“This innovative system, engineered and manufactured by Galileo Technologies, allows us to extend the scope of the current infrastructure of CNG stations and to fill tractors right at their fleet yards. For the solution we have designed for MBD with the support of Verdek, one of Galileo distributors in North America, we take the CNG from a station owned by Elizabeth Gas in Union, NJ, which is 40 miles away from the MBD’s site,” summarized Pereira.

Galileo Group strengthens its globalization strategy

The Management of Galileo Group led by Osvaldo del Campo (CEO) have established a strategic partnership with Blue Water Energy and acquired the entire share capital of the Company from erstwhile shareholders, including Sideco shares from Socma Group. With this operation, Galileo supports its globalization approach, while the CEO of the company also becomes a major shareholder of the group.

Galileo Group’s core capabilities include the development of goods and services for the natural gas, biogas and hydrogen value chains, making the production, transportation and consumption economically feasible through unconventional methods. The company provides innovative and leading technological solutions to its customers, enabling them to achieve more efficient energy supply chains and thereby reduce costs and have a positive environmental impact.

Driven by the recent success of Galileo’s proprietary Cryobox technology in converting flared gas into a usable fuel source, from production assets in Bakken, North Dakota, the Company is witnessing increased demand from that region. To address this, the Company is also planning to build an enlargement to its Los Angeles manufacturing facility to incorporate production lines for Cryobox LNG Nano stations and thereby provide more efficient solutions to its customers.

Under the new partnership with BWE, the Company has established a new holding company in London ("Galileo Global Technologies") and plans to embark upon a series of growth initiatives, including the commissioning of a new plant in the city of San Martin, Buenos Aires, in July. This plant will be dedicated exclusively to the manufacturing of customers’ products, consolidating the Company’s operational control over its supply chain.
Luxfer’s Type 4 CNG cylinder

Luxfer’s Type 4 CNG cylinder will officially launch its second generation of G-Stor™ Go Type 4 carbon composite cylinders for alternative fuel (AF) containment. Luxfer’s new GEN2 cylinders provide a 9% volume increase of CNG in terms of diesel gallon equivalents (DGEs) and a 15% weight savings compared to the company’s first-generation Type 4 AF cylinders. When compared to conventional competitive hybrid carbon-fiberglass cylinders, the DGE volume improvement increases to 14% and the weight savings grows to 30%.

Cylinders diameters from 22 inches to 27 inches are available; cylinder lengths range from 40 inches to 140 inches, the longest Type 4 fuel cylinder in the industry. GEN2 cylinders feature a new polymer liner and patented boss design that provide the highest level of liner performance and gas retention.

Luxfer recently began shipping new GEN2 cylinders to its customers that serve the refuse truck, class-8 heavy-duty truck and medium-duty truck sectors. Mark Lawday, Luxfer’s alternative fuel business development director, said: “We are excited that our long-term development and investment related to our GEN2 range are complete and that we can now offer the extra volume and weight savings that our customers need to optimize performance of their CNG systems. Feedback about these new products has been very positive.”

GEN2 cylinders are equipped with Luxfer’s proprietary G-Flo™ valves that enable faster filling and provide more usable gas. “The combination of our higher-volume, lighter-weight cylinders and our unique valve technology should help relieve user ‘range anxiety’ about CNG-powered vehicles,” added Lawday.

Hexagon’s SMARTSTORE CNG module

Hexagon Composites’ wholly owned subsidiary Hexagon Lincoln has received US DOT (Department of Transportation) approval to operate its newest Mobile Pipeline® product in the United States. The enhanced SMARTSTORE® module offers the highest CNG volume of any 20 ft container transporting up to 245,000 scf (6,910 scm), with a total water volume of 23,175 liters. It is also suitable for transporting compressed hydrogen gas (CHG).

Containing larger cylinders than previous modules, SMARTSTORE® achieves greater volume with fewer tanks and connections. Horizontal mounting of up to 15 MAGNUM™ tanks sized to the entire container.
Emcara’s garter vent caps benefits CNG systems

Emcara Gas Development Inc. announced the major benefits of using their Garter Vent Caps on CNG systems. The Garter Vent Cap was designed to keep outside water and other foreign matters out of the system. It has been well documented that allowing water and other foreign matter into a system can cause major damages that may be detrimental to the entire system, including damage to any Pressure Relief Devices (PRDs) on the market.

It is critical to keep the system sealed from outside materials and the Garter Vent Cap allows for a robust line of defense. The Garter provides a strong seal between itself and the vent line, ensuring that water and other materials do not enter the system, while at the same time staying protected from UV light deterioration, pressure sprays, and other actions that have caused plastic or other caps to fly off or become damaged.

The Garter Vent Cap also possesses a unique poppet action that allows gas to escape and then quickly re-seals itself. It is not unusual for a small amount of gas to build up in the line, the Garter allows for such permutation while still protecting the system from outside materials. The Garter “releases” between 5 to 10 psi of pressure. This allows integrators to do away with weep holes, which is another possible area for water to enter the system.

Korea bans diesel vehicles and encourages use of alternative fuels

Hexagon Composites pursues opportunities in local CNG market

Government plans to install first LNG bunkering station
length of the module ensures easy access to plumbing and reduces maintenance costs. The main advantage of its robust and simple design continues to be a high rate of gas flow. Its low weight and compact intermodal dimensions make it ideal for transporting energy gases by road, rail and sea.

“USDOT approval allows North American customers to take advantage of lower capital expenditures for clients requiring a smaller footprint than our TITAN® trailer,” said Frank Häberli, Vice President, Mobile Pipeline® division. “We are pleased to provide off-pipeline customers a full range of competitive, lightweight, bulk-hauling options for clean-burning natural gas, biomethane and hydrogen.”

The new SMARTSTORE® was designed and tested in accordance with the United States Pipeline Hazardous Materials Safety Administration (PHMSA) Special Permit 14951, and reviewed by an independent inspection agency. It also has American Bureau of Shipping (ABS) approval for operation in Latin America, Asia and Africa. In Europe, the Company offers an ADR/TPED approved version.

CleanCNG™ compressor

Clean Energy Fuels Corp. introduced the most advanced heavy-duty non-lubricated compressor for the natural gas fueling market. The CleanCNG™, developed by engineers at Clean Energy’s subsidiary Clean Energy Compression in Chilliwack British Columbia, incorporates revolutionary improvements in compressor design and intelligent engineering, resulting in ultra-low vibration and noise in a compressor that is unparalleled in scalability, parts commonality and overall performance.

The new compressor features standardized and modular construction that improves initial specification and cost-effectiveness, offering quicker delivery time and more reliable operation with extended service intervals. Specifically designed for expansion, the CleanCNG™ is available in 150 hp – 300 hp configurations. It also has ultra-low vibration and noise (at 75 dBA @ 3m), making it suitable for even residential neighborhood installations. Moreover, it is the only natural gas compressor whose control systems, assembly and enclosure are designed and built to be mated together in an expandable manner.

“The CleanCNG™ is a revolutionary product in the compression industry. We went back to the drawing board and reengineered the product with our customers in mind,” said Andrew Littlefair. “We were able to deliver a product that can be built more efficiently, and maintain the highest levels of compression performance available anywhere in the industry today.”

TransLink, the regional transit authority to Metro Vancouver, B.C., recently purchased six of the new units. “We were impressed with the CleanCNG™ because it offers us the low oil carry-over we count on but also a significant opportunity to decrease capital and operating costs because of simpler deployment and improved serviceability. Longer-term, it offers the most scalable platform available, which will allow us to expand as needed to meet our growing fleet fueling requirements,” said Joe Buck, Senior VP of Acquisition at TransLink.

McNeilus’ enhanced CNG system

McNeilus Truck & Manufacturing, Inc., an Oshkosh Corporation company, announced its McNeilus® NGEN™ CNG systems now offer customers an enhanced high capacity, low profile back-of-cab configuration. Ideal for fleets with class 7 and class 8 trucks, the NGEN brand system uses an exclusive, streamlined design with 50% fewer flitting connections and 25% fewer plumbing components than industry standard systems.

Upgrades included three of Luxfer’s new GEN2 G-Stor™ Go type 4 cylinders, optimizing the overall weight of the system and minimizing the height to meet low-clearance specifications. Each cylinder is fitted with a Luxfer G-Flo™ One-turn Valve that not only extends vehicle range by providing more usable gas at the required flow rate, but also significantly increases the filling flow rate. A dedicated pressure-relief device (PRD) system spans the full length of each cylinder and provides continuous heat protection.

“We’ve improved our newest back-of-cab system, reducing overall weight and increasing capacity, all while maintaining the lower profile municipalities and construction vehicles with dump body configurations require,” said Lucas Crist, project engineer at McNeilus. “It provides customers with the benefit of all the needed capacity to get them through a full day’s work in a single module with 92 diesel gallon equivalents (DGEs).”

The 92 DGE CNG back-of-cab fuel system offers customers exceptional value in innovation, performance, weight, fill time and durability, all backed by a huge service and support network.

Thomas Built Buses’ new NGV

Thomas Built Buses, along with Freightliner Custom Chassis Corporation, has announced the official launch of the Saf-T-Liner® C2 CNG school bus. This will be the first compressed natural gas engine in the industry on the popular Type C product. Although a number of school districts already have shown interest in the new bus, orders can now officially be placed.

The Saf-T-Liner C2 CNG utilizes the Cummins Westport ISB6.7 G 6-7 liter natural gas engine and an Allison 2000 series transmission. The new bus is CARB-certified and exceeds EPA 2013 emissions requirements. Like all other C2 models, the Saf-T-Liner C2 CNG features excellent driver ergonomics and maneuverability, along with the best visibility, safety and durability in its class.

“We are proud to open orders for the new Saf-T-Liner C2 CNG. Since we launched the Saf-T-Liner® HDX CNG 20 years ago, we have seen how efficient and economical CNG can be for our customers,” said Caley Edgerly, president and CEO of Thomas Built Buses. “We are pleased to take our ever-popular C2 model and upfit it to be used with compressed natural gas for the many school districts which are looking for a lower-priced, cleaner and increasingly abundant fuel supply. The Saf-T-Liner C2 CNG is a great addition to our family of alternative-fueled buses.”

Several school districts already have committed to being among the first to purchase the new Saf-T-Liner C2 CNG school buses as they roll off the line including North Kansas City School District and Blue Springs School District in Missouri. Orders are rolling in now and production is expected to begin next month.
Cross-country rally educates on the benefits of CNG vehicles

The mission of the “CNG from Sea to Shining Sea Road Rally” was to inform the American public on the benefits of natural gas vehicles and to demonstrate the viability and vibrancy of the domestic market. The rally successfully showed that NGVs can travel across the nation using a broad network of natural gas fueling stations.

On Monday, May 30, three CNG-powered vehicles departed from Long Beach on a cross-country rally to demonstrate that there are enough CNG filling stations in the United States to provide fuel for the 3,144-mile trip. The road rally was designed to inform and educate the American public on the benefits of NGVs and the CNG fueling infrastructure. The kick-off event for the CNG From Sea to Shining Sea Road Rally featured static displays of compressed natural gas vehicles in use in the City of Long Beach, and a short presentation.

“Long Beach fully supports the increased use of alternative fuels, and we’re excited to promote the viability of natural gas vehicles and infrastructure by sponsoring this rally,” said Mayor Robert Garcia. “We know from experience that increased use of natural gas over other fossil fuels reduces greenhouse gas emissions and improves air quality.”

“Looking to the future, we are committed to promoting natural gas uses for homes, businesses, and as a clean-burning and economical fuel source for an ever growing natural gas vehicle infrastructure,” said Bob Dowell, Director, Long Beach Gas and Oil.

The rally vehicles made 13 media stops along the way, and were joined by other NGVs—in total there were at least eight vehicles—before it ended in Washington, D.C.

“This rally was a great symbol of the ease of what’s possible when traveling across the country in a natural gas vehicle,” said NGVAmerica President Matthew Godlewski. “But in reality this is actually happening everyday as more private fleets, municipal transit agencies, trash haulers, and consumers continue to choose clean-burning natural gas to power their vehicles.”

The cross-country trip included a 2010 Ford F-150 that was driven by Pat Riley, Green Fleets General Manager, Gibson County Utility District of Trenton, Tennessee. Pat made the 3,143-mile trip using 136 gasoline gallon equivalents (GGEs) of CNG at an average price of $1.85. At one station, natural gas was just 35 cents per GGE. The total cost of fuel used on the trip was $251.60.

Fifty awards were given out during the rally to local fleets and representatives who support natural gas vehicles in their area. The well-attended public stops also featured educational workshops, presentations by NGV-advocates, and a variety of display vehicles to showcase the versatility of natural gas as a transportation fuel.

NGVAmerica, the American Public Gas Association (APGA), and American Gas Association (AGA) were the “CNG from Sea to Shining Sea Road Rally” presenting sponsors and were joined by 44 other sponsors.
Ontario unveils climate change plan featuring NGVs

With an investment of up to $100 million, the new Climate Change Action Plan aims to accelerate the use of clean technology and supports the introduction of renewable natural gas to help reduce greenhouse gas emissions.
Ontario Government wants to lead the growth of the low-carbon economy with the release of the province’s Climate Change Action Plan, which will provide people and businesses with tools and incentives to accelerate the use of clean technology that exists today. Through this plan, the province will support the introduction of renewable natural gas, which will help reduce greenhouse gas emissions.

Through the Climate Change Action Plan, Ontario is investing up to $100 million of cap and trade proceeds over four years to support the implementation of a renewable content requirement for natural gas and provide support to encourage the use of cleaner, renewable natural gas in transportation, industrial and buildings sectors.

Ontario also intends to invest approximately $20 million over four years to pilot solutions to reduce emissions from transportation and goods movement by promoting the use of renewable natural gas from the digestion of agricultural materials and food wastes.

The province intends to deliver a cost-shared program to support the production of renewable natural gas, fueling systems, conversion of transportation fleets to renewable natural gas fueling resulting in quick and economical greenhouse gas pollution reductions.

Ontario will also invest up to $170 million over four years in a new Green Commercial Vehicle Program to provide incentives to eligible businesses that want to buy low-carbon commercial vehicles and technologies to reduce emissions, including natural gas-powered trucks.

Investing up to $100 million over four years, the province intends to work with the Ontario Trucking Association, Union Gas, Enbridge and others to establish a network of natural gas and low- or zero carbon fueling stations. It will work with utilities to ensure the recovered biogas content of the fuel provided is increased over time to further lower the carbon footprint of this alternative fuel.

Omnitek Engineering Corp. announced it has appointed Hiller Truck Tech Inc., based in Ontario, Canada, as an authorized diesel-to-natural gas engine conversion center to address the increasing demand for natural gas powered heavy-duty engines in Canada. Hiller will offer fleet operators a choice of either a diesel-to-natural gas engine conversion of a customer’s heavy-duty truck, or the option of purchasing a new Glider built by Hiller with an overhauled and converted “drop-in” ready natural gas engine.

“Our EPA-approved diesel-to natural gas engine conversion technology offers fleet operators meaningful economic and environmental benefits. Hiller Truck Tech is well-positioned from a technical and capacity standpoint to accelerate fleet conversions in Canada, and we look forward to working with this highly regarded service organization,” said Werner Funk, president and CEO Omnitek Engineering Corp.

“Ontario recently announced multi-year greenhouse gas emissions reduction goals: 15% from 1990 levels by 2020, 37% in 2030 and 80% in 2050. Natural gas heavy-duty trucks will help in achieving these goals, and utilizing diesel-to-natural gas engine conversions rather than purchasing new more expensive trucks will substantially increase the percentage of NGVs in the truck population. Furthermore, converting a diesel engine to natural gas during the normal engine overhaul cycle of an engine with a 20-year service life is a compelling economic proposition,” Funk added.

“We are seeing renewed interest in diesel engine conversions from our customers, especially because of the environmental and economic benefits. The recently signed 200-nation “Paris Agreement on Climate Change” should attract further interest in the benefits of Omnitek’s technology and the utilization of natural gas, and we look forward to working with Omnitek to help Canada to meet its sustainability goals,” said David Hiller, president of Hiller Truck Tech.
San Francisco big project features truck fleet conversion and RNG stations

Scavenger has part of its refuse truck fleet powered by CNG and contracted Clean Energy to build several fueling stations supplying biomethane to power their vehicles. The company also developed the first dry anaerobic digestion center in the U.S.
Clean Energy Fuels Corp. announced that the City of Santa Monica has awarded Clean Energy a multiyear LNG contract to fuel its Big Blue Bus (BBB) fleet of vehicles. The 5-year deal, worth an estimated $3 million per year, will enable BBB to continue using Clean Energy’s Redeem™ brand of renewable natural gas (RNG), rated up to 90% cleaner than diesel and considered the cleanest transportation fuel available. BBB began using Redeem™ by Clean Energy in January 2015.

BBB, one of the first transit agencies in the nation to contract for Redeem™, will also become one of the first agencies to incorporate the new Cummins-Westport 8.9L ISL G Near-Zero 0.02 NOx engine, the first mid-range engine in North America to receive emission certifications from both U.S. Environmental Protection Agency (EPA) and Air Resources Board (ARB) in California that meet the 0.02 g/bhp-hr optional Near Zero NOx Emissions standards.

Big Blue Bus, which includes 200 natural gas buses, plans to replace over 100 of their existing bus engines with the new Near-Zero natural gas engine over a three-year period, making BBB one of the cleanest transit agencies in the nation. When the transition is complete, BBB is expected to have reduced their NOx emissions by over 90% and their GHG emissions by 8,000 Metric Tons, annually.

Introduce by CWI earlier this year, the new Cummins ISL G 8.9L Near Zero 0.02 NOx engine is designed for medium-duty truck, urban bus, school bus and refuse applications and is available on the market today. Cummins-Westport plans to begin delivering an 11.9L version that is also EPA and ARB certified for the heavy-duty trucking industry in 2018.

“The City of Santa Monica has a deep commitment to the people and environment in our community. By combining the environmental benefits of RNG with the technological advances of this engine, we are proud to say that we are in fact, one of the cleanest transit agencies in the nation,” said Ed King, BBB’s Director of Transit.

Santa Monica uses Clean Energy’s biogas to fuel fleet bus

Clean Energy Fuels Corp. announced that the City of Santa Monica has awarded Clean Energy a multiyear LNG contract to fuel its Big Blue Bus (BBB) fleet of vehicles. The 5-year deal, worth an estimated $3 million per year, will enable BBB to continue using Clean Energy’s Redeem™ brand of renewable natural gas (RNG), rated up to 90% cleaner than diesel and considered the cleanest transportation fuel available. BBB began using Redeem™ by Clean Energy in January 2015.

BBB, one of the first transit agencies in the nation to contract for Redeem™, will also become one of the first agencies to incorporate the new Cummins-Westport 8.9L ISL G Near-Zero 0.02 NOx engine, the first mid-range engine in North America to receive emission certifications from both U.S. Environmental Protection Agency (EPA) and Air Resources Board (ARB) in California that meet the 0.02 g/bhp-hr optional Near Zero NOx Emissions standards.

Big Blue Bus, which includes 200 natural gas buses, plans to replace over 100 of their existing bus engines with the new Near-Zero natural gas engine over a three-year period, making BBB one of the cleanest transit agencies in the nation. When the transition is complete, BBB is expected to have reduced their NOx emissions by over 90% and their GHG emissions by 8,000 Metric Tons, annually. Introduced by CWI earlier this year, the new Cummins ISL G 8.9L Near Zero 0.02 NOx engine is designed for medium-duty truck, urban bus, school bus and refuse applications and is available on the market today. Cummins-Westport plans to begin delivering an 11.9L version that is also EPA and ARB certified for the heavy-duty trucking industry in 2018.

“The City of Santa Monica has a deep commitment to the people and environment in our community. By combining the environmental benefits of RNG with the technological advances of this engine, we are proud to say that we are in fact, one of the cleanest transit agencies in the nation,” said Ed King, BBB’s Director of Transit.

South San Francisco Scavenger Co. is one of the few carbon negative fleets in the U.S. with a drastically small carbon footprint compared to its competitors. Scavenger has gained tremendous community support and a competitive advantage thanks to its commitment to fueling a cleaner, CNG fleet.

In 2009 Scavenger, along with its partners, won a bid with the City of Livermore, making an unprecedented commitment to convert its entire fleet to CNG. However, the closest CNG fueling station was far from their daily routes and the contract started in less than six months. The trucks needed to be ready to go on day one, with no exceptions and no extensions. Scavenger brought the problem to Clean Energy to help build a new station.

“The Clean Energy team was instrumental to us rolling out a brand new franchise,” said Scavenger President Doug Button. With the success of the Livermore project, Scavenger’s confidence in CNG strengthened. With over 40 trucks in their fleet, 22 are now CNG-powered and all will be converted as the company’s diesel vehicles are retired.

Since 2009, the company has engaged with Clean Energy to build and maintain a total of five Redeem® renewable natural gas (RNG) flowing stations with 165 overnight, time-fill dispensers in the Bay Area.

Furthering its commitment to innovation and waste reduction, Scavenger set its sights on creating its own fuel from commercial and residential waste. With Clean Energy and other partners, the company developed the first dry anaerobic digestion (AD) center in the U.S.

The collected organic waste makes up to 500 DGE/day of RNG and connects with a Clean Energy fueling station nearby. What is left over in the digester goes to a compost site for farming and other uses.
NGV America develops best practices for CNG refuse trucks

Along with the Solid Waste Association of North America, NGV America will issue a complete guide to provide the latest information used by fleets for safely operating collection and transfer vehicles that operate on natural gas.

The Solid Waste Association of North America (SWANA) and Natural Gas Vehicles for America (NGV America) announced their collaboration to develop a new safety and best practices guide for fueling and maintaining natural gas powered refuse trucks. The document will provide the latest information used by fleets for safely operating collection and transfer vehicles that run on clean-burning and affordable natural gas.

“NGV America is the leading association working to promote the use of natural gas refuse vehicles, and SWANA is the largest association for the waste and recycling sector in North America, and we both have a strong commitment to safety. By working together and take advantage of each association’s expertise, we expect the guidance document will provide critical information for members of both associations and others in the waste and recycling industry,” said SWANA’s executive director and CEO, David Biderman.

NGV America’s president, Matthew Godlewski, said, “The refuse segment continues to be a strong growth driver in America’s fleet of natural gas vehicles. Communities are demanding cleaner, quieter, more cost-effective options for the refuse vehicles running through their neighborhoods and natural gas delivers the best option. Our goal in partnering on this new document is to bring further awareness to best practices and demonstrate that safety continues to be the industry’s top priority.

NGV America’s Technology and Development Committee is leading the collaborative effort with SWANA. The committee is comprised of over 70 NGV industry stakeholders who work together to improve safety and maintenance issues, further codes and standards development, and to promote the latest innovation to improve the NGV experience for fleets and consumers.

Education on renewable natural gas at Congress

Representatives of NGV America met in Washington, DC in May for the annual Capitol Days. Educating and meeting with House and Senate staff on the benefits of natural gas vehicles and renewable natural gas (RNG) is a very important part of NGV America’s Congressional outreach activities. This year, the visits were undertaken in collaboration with members of the RNG Coalition.

NGV America members met with over 35 House and Senate offices. For lunch hour, numerous Senate staff were briefed on the latest developments on and needs for NGVs and RNG. NGV America thanked all their members and the members and staff of the RNG coalition for their participation in advocating for NGVs and RNG in federal policy and regulations.

The RNG Coalition is a member-led non-profit organization dedicated to the advancement of renewable natural gas (biogas, biomethane) as a clean, green, alternative and domestic energy resource.
Hydrogen mobility gains momentum in California

In Orange County, the first zero-emission hydrogen fuel cell bus has been deployed as part of a two-year demonstration project to complement OCTA’s existing fleet. Moreover, Long Beach has debuted a hydrogen powered car, which will be in service at the City’s Motor Pool for a six-month pilot test to assess practicality for further use.

First hydrogen station opens in Central Coast Region

A major roadblock for widespread adoption of fuel cell cars came crashing down with the opening of the True Zero station at Conserv Fuel, 150 S. LaCumbre Road in Santa Barbara, the latest addition to the world’s largest network of hydrogen refueling stations being built in California by First Element Fuel, Inc. This generation of vehicles powered by fuel cells will be able to travel more than 300 miles on a single charge and a “fill up” of True Zero will take four minutes or less.

“We’re excited about this effort to provide O.C. residents with eco-friendly transportation,” said Lori Donchak, OCTA Chair. “We’re proud to be at the forefront of environmental technology and progress.”

“As a large urban operator in Southern California, OCTA is setting a strong example for a public agency striving to make positive impacts on the environment,” said Darrell Johnson, OCTA’s Chief Executive Officer. “We are proactive in our efforts to join the cutting-edge community of hydrogen-fueled transportation.”

The new hydrogen-powered bus will run along Route 53 and Route 145, allowing OCTA riders to experience the new technology. OCTA will utilize the hydrogen fueling station at the University of California Irvine, which deployed its first fuel-cell-powered bus in April 2015.

Long Beach: first hydrogen car

The City of Long Beach recently acquired one of the first hydrogen fuel cell vehicles that is available commercially, a Toyota Mirai that runs solely on hydrogen and has no emissions, other than water. With a range of approximately 300 miles and a combined city/highway fuel economy rating of 66 mpg, the Mirai is the most fuel efficient hydrogen fuel cell vehicle rated by the Environmental Protection Agency (EPA).

“As a leader in making cities more sustainable, we are proud to implement new technology that reduces our impact on the environment,” said Mayor Robert Garcia, who recently hosted the launch of CNG cross-country rally at his city.

The Toyota Mirai will be in service at the City’s Motor Pool for a six-month pilot test to assess practicality for further use. After the pilot, the vehicle will be placed in several departments for further testing and to garner more feedback. Refueling takes about five minutes, and is done at the hydrogen station at 3401 Long Beach Boulevard, which is open to the public.

The City of Long Beach recently converted more than 18% of its total vehicle fleet to renewable fuels. By using renewable liquid natural gas (RNG), the City expects a reduction of more than 6,000 tons of carbon emissions a year.
San Francisco fuel cell electric vehicles at the forefront

Energy Department announced the City of San Francisco has been selected as the first Climate Action Champion with a $4.75 million in funding to develop programs embracing hydrogen and fuel cell technologies for transportation.

The Energy Department’s (DOE) Office of Energy Efficiency and Renewable Energy (EERE) announced the city of San Francisco has been selected as the first Climate Action Champion to pursue hydrogen and fuel cell technologies for local transportation, in addition to new analysis projects by Strategic Analysis, Inc.

The nearly $4.75 million in funding for both efforts will go towards the development of education and outreach programs to increase the deployment of fuel cell electric vehicles (FCEVs) and hydrogen infrastructure, as well as provide detailed cost analyses for hydrogen fuel cell systems, hydrogen storage, and hydrogen production and delivery technologies.

Today’s selections were announced by Deputy Assistant Secretary Reuben Sarkar during a meeting in Berkeley, California of the International Partnership for Hydrogen and Fuel Cells in the Economy, a government partnership of 17 countries and the European Commission coordinating activities in hydrogen and fuel cells.

With this funding, the San Francisco Department of the Environment will conduct comprehensive training and educational activities for hydrogen and fuel cell stakeholders throughout the Bay Area. A key goal of this project is to harmonize local regulations and building codes to ease the siting and construction of hydrogen fueling stations while reducing the cost and complexity of FCEVs for the community through regional education and outreach.

In addition, Strategic Analysis, Inc., based in Arlington, Virginia, has been selected to analyze the cost competitiveness for a range of hydrogen and fuel cell technologies, including those used in hydrogen infrastructure relevant to San Francisco and other projects. These cost analyses and evaluations are critical components to move the industry of hydrogen and fuel cell technology development towards widespread commercial deployment.

Project partners include the San Francisco Clean Cities Coalition, the California Fuel Cell Partnership, the Business Council on Climate Change, and the Transportation Sustainability Research Center at U.C. Berkeley.

In December of 2014, the White House launched the Climate Action Champions Initiative and announced 16 communities from around the country, including the City of San Francisco, as the first class of Climate Action Champions. These communities were recognized for their strong commitment to lowering greenhouse gas emissions and the fight against climate change.
During an event at the University of Windsor/FCA Research and Development Center, Premier Kathleen Wynne announced support for the first plug-in hybrid electric minivan to be built in North America, the Chrysler Pacifica Hybrid. Ontario will partner with Fiat Chrysler Automobiles Canada (FCA Canada) to support production of the minivan at the Windsor Assembly Plant.

The project will safeguard the facility, has created 1,200 new jobs and will secure 4,000 existing positions. It will also support thousands of direct and indirect jobs across Ontario’s automotive supply chain. Ontario will provide up to $85.8 million in funding to FCA Canada from the Jobs and Prosperity Fund for enhanced research at the Automotive Research and Development Centre and to support the world-class workforce at the Windsor Assembly Plant through advanced training and plant upgrades for the production of the Chrysler Pacifica. This investment builds on Ontario’s competitive advantages by supporting a highly skilled workforce and a business climate that enables innovative research. The Chrysler Pacifica Hybrid will also contribute to the transition to a low-carbon economy.

**Sustainable economy in Ontario**

Maintaining an innovative and sustainable auto sector and increasing international trade are part of the government’s economic plan to build Ontario up and deliver on its number-one priority to grow the economy and create jobs. The four-part plan includes investing in talent and skills, including helping more people get and create the jobs of the future by expanding access to high-quality college and university education. The plan is making the largest investment in public infrastructure in Ontario’s history and investing in a low-carbon economy driven by innovative, high-growth, export-oriented businesses. The plan is also helping working Ontarians achieve a more secure retirement.

FCA Canada directly employs over 11,000 people across Ontario at their headquarters in Windsor, and at their assembly plants in Windsor and Brampton, a stamping plant in Etobicoke and an Automotive Research and Development Centre created in partnership with the University of Windsor. The Chrysler Pacifica Hybrid will be eligible for rebate incentives under the province’s new Climate Change Action Plan.

Ontario is investing $20 million to work with public and private sector partners to create a network of fast-charging electric vehicle stations in cities, along highways and at workplaces, apartments, condominiums and public places across Ontario. This is the first Canadian province to allow on-road testing of automated vehicles and it is home to almost 100 companies and institutions involved in connected vehicle and automated vehicle technologies.
Alpha Baking Company has achieved a total petroleum displacement of about 38,000 diesel gallon equivalent, since it switched part of its delivery fleet to propane. The transition also showed a drop in greenhouse gases and a fuel cost savings of seven cents per mile, according to a study released by the U.S. Department of Energy’s Argonne National Laboratory.

Alpha replaced 22 of its 300 diesel trucks with propane vehicles. These trucks are Class 4 Ford E-450 step vans with a 6.8-liter V-10 spark ignition engine with a Roush dedicated liquid propane injection system. These vehicles replaced model year 2002-2007 diesel Freightliner MT35/MT45 step vans equipped with Cummins 5.9-liter ISB diesel engines.

Analysis from Argonne’s Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool showed that the propane trucks had lower fuel economy than the diesel vans but provided notable petroleum displacement and greenhouse gas emission reductions. “Total petroleum displacement was about 38,000 diesel gallon equivalent per year and the greenhouse gas emission reduction was roughly 80 tons annually,” according to Andy Burnham, an environmental scientist at Argonne. “The findings were very encouraging. Propane trucks work well for the baking industry, and their use led to significant petroleum displacement.”

The incremental costs of the propane step vans and the infrastructure needed to support them can be recouped in four to seven years, the study found. In addition, lower fuel prices and a reduction in maintenance costs for propane vans will continue the cost savings long after the capital costs for the vans and fueling stations are recouped.

Fuel economy was 10 miles per gallon for the diesel engines and 8.6 miles per diesel gallon equivalent for the propane vans. The seven cent per mile cost savings resulted from several factors, including the miles travelled for the propane and diesel vehicles, the vehicles’ fuel economy and the relative fuel costs of propane and diesel. For the propane vehicles, the average miles traveled per vehicle was slightly higher, the average fuel economy was lower, and fuel prices were lower. The net result of these three factors is the seven cent per mile fuel cost reduction.

Chicago bakery achieves notable petroleum displacement with Autogas fleet

Alpha Baking Company replaced 22 of its 300 diesel trucks with propane vehicles. The transition also showed a drop in greenhouse gases and a fuel cost savings of seven cents per mile, according to a study released by the U.S. Department of Energy’s Argonne National Laboratory.
The Largest Diameter Type 3 Cylinders in the World!

- 37% More Gas at Fast Fill compared to the Type 4 design
- Better heat dissipation through the aluminum liner
- 13% more DGE per tank than listed; 28% less fuel stops
- Lower price per DGE

Fast Fill. Safe Fill. Full Fill.

CNG cylinders international
Ph: +1 (805) 278-8060 • Fx: +1 (805) 278-8090
info@cng.us.com • www.cng.us.com