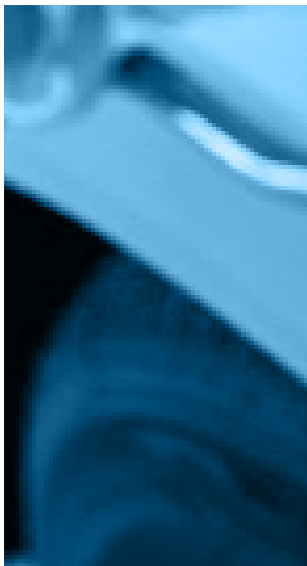
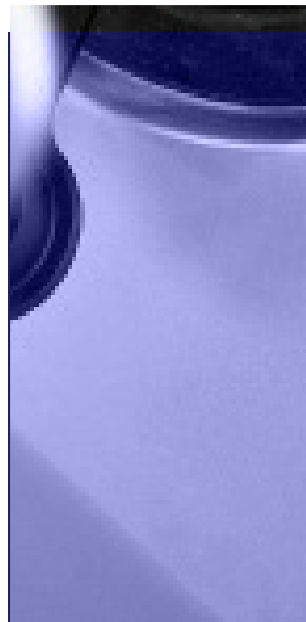


# WHAT AFFECT WILL LOW OIL PRICES HAVE ON THE GROWTH OF NATURAL GAS VEHICLES IN THE USA?



By Wesley W. Busch



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The growth of natural gas vehicles (NGVs) in the United States of America (USA) has been strong over the past five years. Although this growth may not have been at the levels originally expected by the industry, there is no question that, overall, more companies are moving their fleets to NGV, and will continue to do so in 2015 and beyond.

However, a hurdle facing the industry right now is the price of oil, which has halved in price in the last year. The questions the industry needs to confront are firstly, how long will we have relatively lower oil prices and what impact this will have on the development of NGVs.

There are generally two schools of thought regarding NGVs and the price of oil.

Some companies' leaders were ready for the transition from diesel fuel to natural gas but held back when crude oil prices fell so dramatically. Many of these companies have now opted to play a waiting game; until there is more certainty in the market.

Other business leaders are sticking to their business plan for NGVs, taking the view that oil prices will bottom out and rise in due course, thereby supporting their business case for cleaner-fuel vehicles.

"It (the oil price rise) has caused fleets who are in the infant stages of adoption to get weak in the knees with their commitment to it, but most of those who have begun adoption, who have a long term investment strategy with natural gas, are unaffected by the decline," Scott Ballinger, vice president of sales and marketing emeritus of CNG 4 America, said.

CNG 4 America is a fairly new compressed natural gas (CNG) infrastructure developer, having only been in business for five years. CNG 4 America is bullish on NGVs, but Ballinger points to growth as the reason.

He said the company's sales have shown an average of 25 percent increase each of those years, and is anticipating similar growth in turnover this year.

## National initiative being considered

Two US senators are backing legislation to tax diesel fuel and liquefied natural gas by energy content rather than volume, ending the current tax code disparity they say puts LNG at a market disadvantage. The bill was introduced to the Senate on 3 February. It was referred to the Finance Committee, which on 11 February, approved the bill, according to Senator Richard Burr's website.

The bill must next pass the Senate and move to the House of Representatives for its approval before being sent to the president, who must sign it for it to become law.

"LNG could be a better and more economical fuel choice," Colorado Democrat Michael Bennet said in a release on his website 3, "but the current tax system has built in disincentives."

"This bill would allow LNG and diesel to compete more fairly in the market, while offering a cleaner fuel source to help keep our air clean," the Colorado senator said.

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"This is a no-brainer," said North Carolina Republican Richard Burr on Sen. Bennet's website. "Our bill would eliminate a current tax disincentive ... Our bill will take steps toward decreasing our dependence on imported energy sources."

"The current tax system for LNG can result in thousands of dollars of additional cost for companies choosing to use the fuel," Senator Bennett's website states. "If a diesel truck travels 100,000 miles at 5 miles per gallon it consumes 20,000 gallons of diesel fuel. However, an identical LNG truck would require 34,000 gallons of LNG to travel the same distance."

The new president of National Gas Vehicles for America (NGVAmerica), Matt Godlewski, in a statement on the organization's website said "The introduction of this bill demonstrates continued support in the Congress for natural gas as a transportation fuel. Senators Burr and Bennet recognize the important role that clean-burning domestic natural gas can play in improving our air and supporting American jobs at home."

His statement, published on the website on 4 February, went on to say "We are encouraged that critical issues such as fixing the LNG/diesel tax disparity are receiving attention in the new Congress. It is a solid signal that we're getting close to resolving the federal roadblocks that are standing in the way of further accelerating natural gas use in the trucking sector."

## Why are oil prices low now?

A combination of factors led to the current low price of oil.

Typically the prices of oil move up and down because of supply and demand. However, the dynamic is not that simple.

Years of growing demand for oil, diesel fuel and gasoline coupled with geopolitical unrest in oil-producing nations such as Libya and the Middle East boosted oil prices. Subsequently, global oil prices started to slip as the shale gas boom in the US and Canada made the region largely self-sufficient. Oil demand in major consuming nations in Europe and Asia also pushed prices down.

The EIA estimated that the US oil boom has added 4 million barrels of oil production a day.

During the era of high oil prices, companies in US exploration and production sought to extract oil from those fields previously deemed unprofitable. Fracking of these fields moved the US toward the top of the global oil producers, while Canada had technology in place to squeeze oil from the oil sands, pushing their supply potential up as well.

Both of these trends, as well as fracking in Mexico, helped North America to become a major player in the oil and gas world.

No longer were producers only able to punch a hole in the earth, or seafloor, and reap the black gold. Technology has enabled them to squeeze oil and gas out of areas of the earth which had previously been seen as not viable.

The EIA reported that US daily oil production has continued to climb, reaching 9.21 million barrels in the week that ended on Jan. 23, the most in more than 30 years.

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Much of the daily production gains in the US were offset by the decline of oil production available to the global market because of sanctions levied by the European Union and the US against Iran, the third-biggest oil producer of the Organization of Petroleum Exporting Countries (OPEC).

OPEC's decision last November to maintain its production level, at any cost to oil prices and the global economy, is the most significant factor. Whilst there are various reasons for OPEC's decision, many suspect that the current policy on oil prices is designed to slow its displacement caused by growth in the shale gas sector.

By keeping the price of oil low, OPEC led by its biggest producer, Saudi Arabia, may be trying to discourage US and Canadian companies from expanding their oil and gas sector and consequently make the business case for NGV less compelling.

A series of these events has led to the current state of the oil and gas industry where it faces oversupply and waning demand.

This abundance of oil production and higher fuel standards have benefited Americans and their wallets.

The EIA estimates US drivers will save about \$550 this year at the gasoline pumps compared with 2014 because of the lower pump prices that are expected to be available this year.

US President Barack Obama believes the average US family will save even more in gasoline costs this year. "Thanks to lower gas prices and higher fuel standards, the typical family this year should save about \$750 at the pump," he said during his 2015 State of the Union address.

At least one oil and gas company, Phillips 66, is closely watching developments in this industry.

Phillips 66, according to one of its senior advisors, is not actively engaged in the promotion, sales or use of CNG or liquid natural gas (LNG) for non-road or over-the-road vehicle fueling. However, it monitors the trends set by the CNG/LNG vehicle fueling opportunities, and how lower crude, gasoline and diesel fuel prices will affect the acceptance of natural gas in the marketplace.

"The lower gasoline and diesel prices likely do present additional challenges to the adoption rate for the CNG/LNG vehicle fueling options," said Gary Brush, Phillips 66 senior advisor strategic planning and global marketing told FCGI Intelligence.

## Prices will rise. The question is when.

In order for NGVs to be more appealing from a cost perspective, oil prices need to rebound.

CNG 4 America's Ballinger thinks the price of oil will climb by the middle of August, but prices will not return to the level it was in 2014, and will therefore impact on investment.

"This will be a slow climb but we should see oil prices back to around \$65 a barrel by the end of this year," he said.

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Alabama Clean Fuels Coalition Executive Director Mark Bentley prefers to leave it to the pundits to try to determine the level and timing of the oil price recovery.

"That's anybody's guess, but some so called 'experts' say that gasoline and diesel prices have bottomed out and that the rise in prices will start soon. How quickly the prices will rise and how high they will go is impossible for anybody to say with certainty at this point in time," Bentley said.

Parkway Family Automobiles Director of CNG/NGV Business Development Heather Oglesby believes that the price of oil and gasoline will climb, and it may rise to some of the higher prices seen in the past – \$5 a gallon for gasoline – although she hopes it does not get that high.

"All I hear is that the prices of oil and gasoline are going up," she said.

Parkway Family Automobiles is a family-owned group of dealerships in the Houston area, and a member and supporter of the Greater Houston NGV Alliance. It displayed one of its NGVs at the Houston Auto Show in January this year.

"We had a really good reception at the Houston Auto Show. A lot of people didn't realize that owning an NGV is a viable option. We had a few really interested people visit with us," Oglesby said.

## The relationship between infrastructure and NGV uptake

When it comes to building infrastructure, there are two different mindsets. One is that infrastructure will be built when the demand is there. The other is that once infrastructure is provided, this will stimulate demand and the uptake of NGVs will follow.

Ballinger acknowledged some potential investors in infrastructure will be hesitant. "This will certainly make investment into infrastructure more difficult as there is a certain amount of 'wait and see' mentality among investors in this industry," he said.

He said below \$65 a barrel for oil, the NGV industry will be negatively affected by the cost of oil, diesel fuel and gasoline. "It will definitely affect it in a negative way. Although natural gas is clean and Americans mostly convert due to the savings they can achieve, if the savings are not there, the majority will not convert."

"Very few NGV station builders are willing to invest in stations unless they have contracts with anchor fleets to support those stations, and anchor fleets are currently hard to find because of the lower gasoline and diesel prices currently in place," Bentley said.

Many investors want to see the return on investment sooner rather than later.

Bentley, Alabama Clean Fuels Coalition executive director, added, "It is doubtful that the NGV market will grow at all if the price of oil stays at the current low levels. Companies like to promote the green aspect of using CNG but the dominant factor for a company to move to CNG is its ability to show a cost savings and a reasonable rate of return."

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"The two primary reasons are the lack of NGV infrastructure and the higher cost for NGVs," said Bentley.

Ballinger points out the high cost of conversion.

Natural gas refueling stations are limited, but growing in number, The overall acceptance and transition to natural gas from diesel and gasoline is just being temporarily held back because of the oil prices.

## It's not all bad news

"Every large fleet that converts makes the Natural Gas Vehicle of America (NGVA) news. Because the overall number of NGVs in America is still so low, any additions to the number are a milestone. For us, it was our chief customer buying 20 new Class 8 dedicated CNG tractors in November," Ballinger said.

Bentley also believes shaky oil prices will keep some potential compressed natural gas (CNG) users on the sidelines.

He believes that once oil prices stabilize, then fleets that are 'on the fence' will once again see the benefits of switching.

"CNG users will wait for diesel and gasoline prices to stabilize at significantly higher levels before moving into the CNG market. It is difficult for a potential CNG user to determine a payback, or rate of return, in a period of price instability," Bentley said.

Oglesby agrees that the companies that are committed to NGVs are still in that market. The same is true for those infrastructure providers.

NGVAmerica, which represents more than 200 companies, environmental groups, and government organizations interested in the promotion and use of natural gas and biomethane as transportation fuels, reports that as of October 2014, there were 15.2 million NGVs on the roads throughout the world, with 150,000 of those on US roads.

The NGVs in the US are comprised of 37,000 heavy-duty vehicles, 25,000 medium-duty vehicles and 80,000 light-duty vehicles.

There can be little doubt that the market trajectory is upward, even if a short term hiatus is expected whilst the oil prices stabilize.

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## More evidence of growth

- Agility Fuel Systems, headquartered in Santa Ana, California, recently announced it is moving forward with the construction of \$7.5 million production facility and regional headquarters in Salisbury, North Carolina, according to [FleetsandFuels.com](http://FleetsandFuels.com).

Prior to the fall of oil prices, at the ACT Expo 2014 in Long Beach, Calif., Agility announced a joint venture with Hexagon Lincoln to manufacture a new breed of lightweight Type IV CNG fuel cylinder and the assemblies needed to mount them on heavy duty vehicles.

The facility is about 14 miles from the Freightliner factory in Cleveland, North Carolina.

Agility has been in business for 18 years and has more than 25,000 trucks on the road, logging 1.5 billion miles per year," the company reports.

- Agility and CNG fuel provider Clean Energy Fuels are mounting a joint CNG fuel system sales program aimed at reducing the incremental cost of heavy-duty natural gas trucks, according to [FleetsandFuels.com](http://FleetsandFuels.com).

Agility and Clean Energy are to work with trucking customers and offer CNG fuel systems installed at a substantially reduced cost when there is a natural gas fueling agreement. This program is to reduce the incremental cost for operators as Clean Energy continues to open locations throughout its nationwide network of natural gas fueling stations.

- The completion of Fast-Fill CNG outlet in San Antonio, Texas, means that CNG is available now from Love's in all three cities of the Texas Triangle – Houston, Dallas and San Antonio. To celebrate, Love's is offering CNG for just 99¢ per gallon at five locations, from Valentine's Day through March 1.

"Love's Fast-Fill CNG network has grown from one location in 2012 to 11 facilities and counting," Bill Cashmareck, natural gas general manager for Love's, said in a press release. "Offering CNG to heavy-duty fleets and passenger vehicles for 99¢ is a way we can show our appreciation."

Love's first location in the Houston area opened early last year in Willis and the first location in Dallas opened this past summer.

- Transpo has selected EFS West as the contractor for a \$3.8 million dollar CNG facility in South Bend, Indiana. "This will be the first fast-fill public CNG facility in the region and will be able to fuel up to six vehicles at one time," an agency said, according to [FleetsandFuels.com](http://FleetsandFuels.com).

Transpo scored another regional first this past autumn, taking delivery of the first of its 16 CNG-fueled, 35-foot Xcelsior buses by New Flyer, [FleetsandFuels.com](http://FleetsandFuels.com) reported in September 2014.

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- The Pennsylvania Turnpike and Sunoco offer compressed natural gas for trucks and cars at the Turnpike service plaza at New Stanton, east of Pittsburgh. There is a CNG dispenser primarily for cars located with the gasoline pumps, and another for trucks with the diesel pumps, according to a report on FleetsandFuels.com.

A third dispenser is “outside the fence” – supplying CNG to drivers not on the turnpike.

- Florida’s city-owned Pensacola Energy gas utility says that its “best customer” for compressed natural gas is adding 51 natural gas vehicles this year, including 34 CNG-fueled Autocar refuse trucks, according to FleetsandFuels.com.

## Conclusion

NGVs will continue to gain acceptance and use in the fleets of US companies as more business leaders realize the benefits in cost savings, and overcome jitters about oil prices.

Securing a return on investment is pivotal to the success of NGVs and at present, this may be a challenge. Governmental incentives, such as those offered in Colorado, Utah, potentially North Dakota and many other states may help.

US oil and gas producers are likely to continue trimming output, as they try to balance supply with demand. This may help boost oil prices and balance sheets of the oil and gas companies.

## Key takeaways:

1. The prices of oil and subsequently gasoline and diesel are low for a multiplicity of reasons: changes in the geopolitical climate, oversupply due to new markets and new technology, changing demand for oil and production levels being maintained by OPEC.
2. In the medium to long term, oil prices may rise, however, views are mixed on this.
3. Oil prices will have a short term negative effect on the NGV market. If and when oil prices recover, the economics of switching will be clear and confidence will return to the market, triggering further growth of NGVs.
4. Adoption of NGVs is still very compelling with relatively low gas prices. Early pioneers show no sign of slowing their switch to a cleaner fuel.

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