As Oil Prices Fall, so Does CNG/LNG Penetration in Trucking

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Plummeting global oil prices—which simultaneously drag-down diesel prices—are snagging the growth of compressed natural gas (CNG) and liquefied natural gas (LNG) in heavy-duty highway vehicles in North America, according to a new study by trucking consultant ACT Research.

"With the natural-gas-powered vehicle market seemingly stalled as diesel fuel prices continue to drop, ACT Research has released the results of its updated research on U.S. natural gas transportation fuel trends in the heavy duty truck market," according to the company.

ACT published its first natural-gas-in-trucking study in 2012. That report "was more bullish than today's report [released Nov. 11], reflecting the enthusiasm of the moment that included planned market and product development that has been slow to materialize with a narrowing fuel price spread and improving diesel engine fuel economy gains," according to ACT.

However, “the previous long-term [natural gas market-share] penetration over-statement does not mean natural gas has not grown. It has and will continue to grow, but at a slower rate the next few years,” said Ken Vieth, ACT Research general manager.

Natural-gas-fueled Class-8 truck and transit bus penetration in the U.S. was only 3% in 2013 and “should reach 4% in 2014, or about 11,000 units,” Vieth said.

“Looking at the most likely adoption curve, natural-gas Class-8 penetration is expected to total 23% of the units sold in 2025,” according to the company.

If the total new U.S. Class-8 truck/transit bus market is 200,000 units that year, then the natural-gas share would total 46,000 units, according to the company’s calculations.

Crude futures at $74/bbl

Meanwhile, the benchmark West Texas Intermediate (WTE) crude futures contract at NYMEX on Nov. 13 was trading around $74 per barrel for December 2014 and all of next year. On a parallel front, NYMEX ultralow sulfur diesel (ULSD) futures prices for 2015 were trading in a range of $2.31 to $2.37/gallon, according to the latest CME data (owner of NYMEX).

With crude falling to around $75, that’s close to the break-even point for truckers considering CNG or LNG trucks instead of diesel trucks, according to Georgia-based economic analyst Jon Gabrielsen.

“At this price of oil, it [CNG/LNG] is essentially a big additional investment for no savings at all,” Gabrielsen told Hart’s DownstreamBusiness.com (DB.com).

While U.S. natural gas futures prices still trade at a big discount to crude futures if measured on a Btu basis, “the price of natural gas itself is almost irrelevant because most of the end price for LNG is the phenomenal cost of liquefying it and storage, transport, etcetera,” Gabrielsen said.

Gabrielsen’s most recent written “white paper” on the LNG-versus-diesel question was written in 2013 when oil was above $100 per barrel (see DB.com on 05/14/2013).

In that study, he found that buying an LNG truck (which costs tens of thousands of dollars more than a diesel truck) would be a “total loser, and that is in the $75-$80 per barrel crude range. So at $70-$75 [crude], one would flat-out lose money for every mile you traveled and have invested in all that extra equipment on each power unit and the infrastructure for [natural gas] storage and fueling,” he told DB.com.

Clean Energy Fuels losses worsen

Meanwhile, Clean Energy Fuels—North America’s biggest retailer of compressed natural gas (CNG) and liquefied natural gas (LNG), mainly targeting heavy-duty highway vehicles—on

October 23 announced a $30.2 million net loss for third quarter (3Q) 2014, worse than the $18.79 million net loss posted in 3Q 2013.

So far this year, Clean Energy has piled-up $90 million in net losses, on top of $66.9 million net losses in 2013, $101 million net loss in 2012, and $46.7 million net loss in 2011, according to company records.

The company's accumulated deficit as of 3Q 2014 soared to $458 million, compared to $367 million at year-end 2013, according to Clean Energy's latest "10-Q" filing with the U.S. Securities and Exchange Commission (SEC).

The number of CNG or LNG fueling stations owned, operated, maintained and/or supplied by Clean Energy grew from 224 at January 1, 2011 to 526 at September 30, 2014 (a 134.8% increase).

"Included in this number are all of the CNG and LNG fueling stations we own, operate, maintain or with which we have a fueling supply contract," according to the company.

"The amount of CNG, RNG [renewable natural gas from landfill methane] and LNG gasoline-gallon-equivalents we delivered from 2011 to 2013 increased by 37.8%.

"The increase in [CNG/LNG] gasoline-gallon-equivalents delivered was the primary contributor to increased revenues during 2011, 2012, 2013 and the first nine months of 2014. In addition, in 2013, revenues included $20.8 million in federal VETC [volumetric excise tax credit] revenues related to 2012 due to the reinstatement of such credits in January 2013."

CNG vehicle finance 'not significant'

"To help accelerate the conversion of heavy-duty truck fleets to natural gas, in 2013, we entered a strategic alliance with GE's Transportation Finance business," according to the SEC filing.

"Fleet operators are eligible for loans and leases, including fair market value leases, from GE to acquire trucks from original equipment manufacturers.

"In exchange for committing to purchase specified amounts of natural gas fuel from our stations, we then help offset the monthly cost of the vehicles to make it consistent with the cost of a diesel truck. Our goal is to work with fleet operators to achieve a one to two-year payback on the incremental cost of natural gas heavy-duty trucks, and we consider our alliance with GE to be an important tool in achieving this goal."

However, "through September 30, 2014, we have not generated significant income from vehicle financing activities," Clean Energy admits in the SEC filing.

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