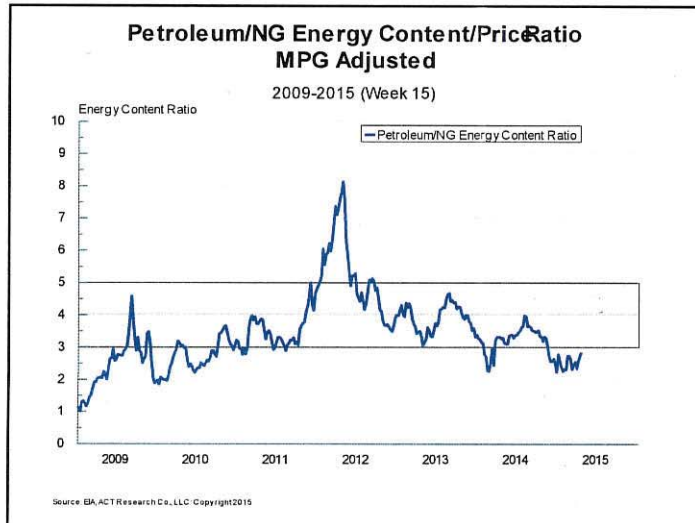


# NG ECONOMIC TRENDS

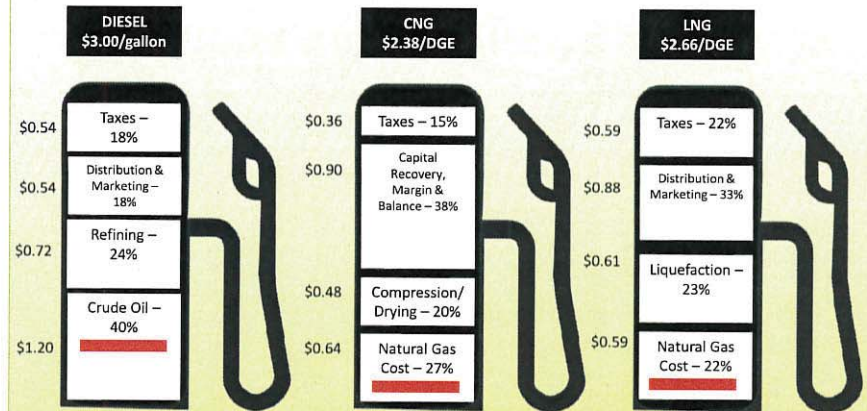
**COMMODITY COST SPREAD:** As of March 16, 2015, one million BTUs of natural gas costs \$2.80, while oil is selling for \$44.39 (WTI) a barrel. The implication is that the raw material cost in a DGE of CNG and LNG is approximately \$.39 a gallon (\$2.80/7.2 as there are 7.2 DGEs in one million BTUs of natural gas). The difference between the raw material cost and the retail price of natural gas at the pump consists of the refining costs, compression costs, distribution and marketing costs, liquefaction (LNG), and taxes.

From a barrel of crude oil (42 gallons), approximately 10 gallons of diesel fuel can be refined. You can't convert all 42 gallons of crude oil to 42 gallons of diesel or gasoline. A certain number of oil-based products are generated from a barrel of crude, and the ratio of one product to another is relatively constant.

On the right, the chart "Correlation to Commodity – a Breakdown," (the latest information available as of January 2015, which lags behind the above costs) outlines the cost breakdown of a gallon of diesel or a DGE of CNG or LNG. Although the actual numbers will vary (we know that a gallon of diesel currently sells for less than \$3.00), the percentage approximations are in the right order. From the Correlation to Commodity chart, the cost of crude oil to make one gallon of diesel is \$1.20. Similarly, the raw material cost to make one DGE of natural gas is approximately \$0.64 for CNG or \$0.59 for LNG as indicated in the chart.



## Correlation to Commodity – a Breakdown



Source: EIA, Clean Cities Alternative Fuel Price Report January 2015 (AFDC, US DOE), Blu LNG, ACT Research Co., LLC Copyright 2015

**HOW COMMODITY PRICE TRANSLATES TO RETAIL PRICE:** Although the retail price is what consumers see at the pump, the ratio of raw material cost of a gallon of diesel fuel to the raw material cost of a DGE of natural gas sets the stage for how much the price of a DGE of natural gas can change in relation to a gallon of diesel. This explains how diesel prices can fall faster than natural gas as the price of crude declines and why the price of diesel escalates faster than natural gas when the price of crude increases.

The leveraging down of diesel fuel prices has a detrimental impact on the ROI calculations at today's energy prices. When the multiplier is low, there is less enthusiasm for adopting natural gas as a transportation fuel. When the multiplier is higher, the ROI to convert to natural gas is covered in much less time.