



# What's Different About My Gas?

## Consumer Education on Sub Octane Changes

### HOW AND WHY HAS MY GASOLINE CHANGED?

- Refiners will no longer produce an unblended 87 octane gasoline. In its place they will begin using an 83 or 84 octane as the base product for producing 87 octane gasoline, which will be a blend of 83/84 octane and 10% ethanol.
- This 83/84 octane with 10% ethanol blended fuel will most likely be the least costly product available. Why? Because the 83/84 octane is less costly to refine than the 87 octane fuel, resulting in an overall reduction in production cost.
- Note: Octane rating or octane number is a standard measure of the performance of a motor or aviation fuel. The higher the octane number, the more compression the fuel can withstand before detonating. In broad terms, fuels with a higher octane rating are used in high-compression engines that generally have higher performance. (source Wikipedia)

### WHY ARE THESE CHANGES BEING MADE?

- The Renewable Fuels Standard (RFS) mandates that obligated parties (gasoline refiners) use a certain number of gallons of ethanol as part of the overall volume of motor fuel gasoline that is sold in the U.S. The number of mandate gallons that must be sold increases each year.
- In 2013 the overall volumes and standards require 16.55 billion gallons of renewable fuels.
- The State of Nebraska is among the last areas of the country to see these changes.
- Gasoline consumption has been declining over the past several years, while the mandate requires an increasing number of gallons of ethanol to be consumed. Thus refiners (suppliers of gasoline) are producing a lower octane gasoline for blending with ethanol to help increase the number of gallons of ethanol sold in gasoline at the least cost to the consumer.

### WHAT FUELS WILL I NOW SEE OFFERED AT THE PUMP?

- This answer is heavily dependent on what fuels are available to the retailer you chose to do business with.
- Depending on the availability you may find:
  - a straight 87 octane gasoline,
  - a 87 octane blended gasoline (83/84 octane plus a 10% ethanol blend),
  - a straight 89 octane gasoline,
  - a 89 octane blend (87 octane with ethanol, plus some 91/92/93 octane gasoline),
  - a straight 91/92/93 octane gasoline,
  - a 91/92/93 octane blended gasoline (87 octane with ethanol, plus some 91/92/93 octane gasoline)

### WHAT EFFECT COULD THESE CHANGES HAVE ON THE PRICE OF THE FUEL I BUY?

- First, each individual retailer sets their own price for the fuel they sell. This is meant to provide a best guess of what you may see in the retail marketing of gasoline.
  - In years past in the Nebraska and Iowa gasoline markets you have seen midgrade (89 octane gasoline) priced less than the lower octane 87 gasoline. You most likely will see this invert itself. The reason is that blending with ethanol reduces the retail price of gasoline to the consumer.
  - In the cases where the lower octane fuel now contains an ethanol blend, you could see the lowest octane fuel being offered for the lowest price.
  - In cases where there is no ethanol blend in the gasoline, you could see the price of these products increase. The reason for this that you are using a higher costing product, premium gasoline, to increase the octane level.



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