



**OFFICE OF THE ATTORNEY GENERAL
STATE OF ARIZONA**

**2005 GASOLINE REPORT
HURRICANE KATRINA**

**CONSUMER PROTECTION SECTION
APRIL 26, 2006**

INTRODUCTION

Hundreds of Arizona consumers called the Attorney General's Office to investigate whether illegal conduct was responsible for Arizona's gasoline prices jumping 48 cents in the days following Hurricane Katrina. On September 9, 2005, Attorney General Terry Goddard launched civil antitrust and consumer fraud investigations into the causes of Arizona's high gasoline prices.¹ The Antitrust Unit ("ATU") issued 45 Civil Investigative Demands ("CIDs") to a cross-section of Arizona's gasoline wholesalers, distributors, retailers and related parties. The CIDs requested information and data regarding supply, demand, sales, prices and industry communications from August 1, 2005 through September 9, 2005.

ATU thoroughly examined all of the information provided by the CID recipients, conducted interviews and performed independent market research to determine whether Arizona's abnormally high prices were the result of collusion or other anticompetitive or fraudulent practices prohibited by law. The investigation did not uncover any illegal conduct. The investigation concluded that Arizona's high prices were primarily caused by:

- Market tightness caused by the industry's "just-in-time" inventory management system, which cannot withstand any supply disruption without causing price spikes;
- An insufficient and fragile delivery system with little or no redundancy;
- Unusually tight gas supply in Arizona just before Hurricane Katrina due to full pipelines and unexpected refinery shutdowns;
- Abnormally restricted gas supply resulting from Hurricane Katrina's disruption of the nation's tightly networked crude oil and gasoline distribution systems and the industry's emergency rationing practices;
- An increase in Arizona consumer demand in the days immediately following Hurricane Katrina;
- Increased profit-taking by retailers, wholesalers and especially refiners.

¹ The Attorney General's Office previously conducted investigations of the Arizona petroleum markets in 1998 and 2003. Reports of the investigative findings are available upon request.

I. THE INDUSTRY'S FUEL MANAGEMENT AND TRANSPORTATION SYSTEMS LIMIT GASOLINE SUPPLY

A. Just-in-Time System Reduces Gasoline Inventories

In the 1990s, oil companies moved to a “just-in-time” inventory management and product delivery system. Under this system, the oil companies reduced storage in Arizona to levels barely sufficient to accommodate normal demand. In this way, gas companies minimize their storage costs and maximize profits. The just-in-time system, however, appears to have reduced the nation’s gasoline reserves by about half.²

Although the oil companies’ just-in-time system may work under ideal conditions, every supply disruption caused by natural disaster, refinery outage or broken pipelines disrupt the tight supply-demand balance. Petroleum markets quickly tighten and prices skyrocket. Thus, consumers pay a high price for the oil companies’ profit maximization strategies.

B. The West’s Inadequate and Antiquated Delivery Infrastructure Imperils Consumers

In the western United States, gasoline supply is tighter and more vulnerable to product shortages and price spikes than other areas of the country. The West has very few pipelines to transport refined product. Arizona is in an especially precarious position with no refineries and virtually total dependence upon two pipelines, one from Texas and the other from California.³ When one of Arizona’s pipelines goes off-line, even for a short time, Arizona’s fuel supply becomes extremely tight and prices drastically increase.

Arizona’s population has grown by 39 percent in the last 10 years⁴ resulting in a 36 percent increase in demand for gasoline.⁵ Despite Arizona’s elevated demand for gasoline, no additional fuel pipelines have been added in Arizona,⁶ though existing pipelines have been upgraded. The East Line, which originates in El Paso and travels to Tucson and Phoenix, has been full for years. Its operator, Kinder Morgan, is currently upgrading the East Line⁷ and projects an increased capacity on that line by 56 percent.⁸

² California Strategic Fuel Reserve Public Workshop, April 24, 2003 materials, p. 24.

³ Kinder Morgan owns and operate two pipelines from El Paso to Tucson – an 8” and a 12” line. Both lines comprise the “East Line.” The East Line provides between 85,000 to 90,000 barrels (3,570,000 to 3,780,000 gallons) of fuel to Arizona per 24-hour period. Kinder Morgan owns and operates a 20” pipeline from Colton, California to Phoenix. It is called the “West Line” and provides approximately 200,000 barrels (8,400,000 gallons) of fuel to Arizona per 24-hour period.

⁴ U.S. Census data.

⁵ Arizona Department of Commerce data.

⁶ The Longhorn Pipeline runs from Houston to El Paso, where it connects with the Kinder Morgan East Line. The Longhorn Pipeline began transporting fuel in October 2005. To date, it is unclear whether the Longhorn Pipeline has added as much refined Gulf Coast product into Arizona as originally anticipated, because there is currently little or no room on the Kinder Morgan East Line to transport additional product.

⁷ The existing 8” line will be replaced with a 12” line and the current 12” line will be replaced with a 16” line. Kinder Morgan also plans to convert the Tucson to Phoenix pipeline, which currently alternates between 8” and 12” pipe, to a 12” pipeline.

⁸ Kinder Morgan expects to complete its East Line upgrade the summer of 2006.

C. The Just-in-time System and Inadequate Delivery Infrastructure Caused an Extremely Tight Supply Situation for Arizona Before Hurricane Katrina

Arizona's gasoline supply was unusually tight throughout the summer of 2005, and our retail prices, which were 11 cents higher than the national average on August 1,⁹ reflected that tightness.

(1) Pipeline and Terminal Issues

During July and August, the East Line went down several times. Additionally, the Phoenix terminal was down for repairs, maintenance and upgrades on several occasions during this period. The East Line down time limited fuel shipments into Arizona causing some shippers to make up their shortfall by increasing their shipments on the West Line. Increased shipments on the West Line, combined with other interruptions, gradually lengthened the shipping cycles, causing the West Line to fall behind schedule. To put the West Line back on schedule, Kinder Morgan restricted the number and volume of shipments.

With both of our pipelines essentially full, no additional product could be shipped into the State via pipeline. The amount of fuel that could actually be shipped to Arizona over the West Line was less than some shippers wanted or needed to meet their customers' needs. Thus, the prorated pipelines were a major factor in Arizona's tight supply before Hurricane Katrina hit in late August.

(2) Unplanned Refinery Shutdowns

Compounding the tightness caused by the pipeline restrictions and rack closures, at least three refineries supplying gas to Arizona unexpectedly went off-line during this period. One refinery, that produces a significant amount of Arizona's special summer fuel blend, went off-line just three days before Hurricane Katrina made landfall. As a result, many Arizona distributors and retailers could not obtain gasoline from their normal suppliers.

II. HURRICANE KATRINA

A. Anticipatory Supply Restrictions

Oil companies alter their distribution patterns in response to threatened or actual supply disruptions in an attempt to make the supply last through the disruption. Even before Hurricane Katrina made landfall on August 29, 2005, some oil companies announced they would supply only their branded customers.¹⁰ Additionally, many refiners put their customers on allocation, meaning they limited the quantity of product available for purchase to each customer. Thus, many wholesalers and retailers did not have enough product to meet elevated consumer demand in the days after Katrina.

Some wholesalers announced national allocations, which limited their branded customers' purchases to a percentage of their historical purchases. They also threatened to

⁹ On August 1, 2005, the average price of a gallon of regular unleaded gasoline in the United States was \$2.28. In Arizona, it was \$2.39.

¹⁰ An oil company's branded customers are those customers that buy the major oil company's gasoline and additive packages and display the oil company's logo, such as Shell, Chevron or ExxonMobil. Unbranded customers purchase only fuel and do not display any major oil company's logo.

impose a per gallon penalty upon any customer who bought product in excess of those historical numbers. This left their branded customers, who cannot sell unbranded or differently branded gasoline, with a difficult decision when their allocated supplies ran out. They could either pay an exorbitant premium for product or turn customers away.

Many unbranded marketers and retailers found themselves in similar predicaments. They had to turn to the tighter, more expensive spot market for supply – if it could be found. The effect of these measures increased the prices at the pump.

B. Actual Supply Disruption

The Gulf area was temporarily paralyzed after Hurricane Katrina made landfall in Louisiana and Mississippi on August 29, 2005. The storm caused widespread destruction, power outages and flooding and disabled a substantial portion of the nation's crude oil production, refining capacity and the nation's gasoline distribution system.

The Gulf region is home to approximately 20 to 30 percent of the nation's crude oil production and 10 to 20 percent of the United States' refining capacity. It is also the source for two major interstate refined gasoline pipelines, the Colonial and Plantation pipelines, serving much of the East Coast. The Capline, a major crude oil pipeline serving the Midwest, also originates in the Gulf. The interstate distribution system was also significantly disrupted because the Colonial, Plantation and Capline pipelines were inoperable for several days due to the hurricane damage and resulting power loss. This too, tightened supply nationwide and caused gasoline prices to soar as oil companies re-allocated supplies to the areas most in need. Uncertainty and speculation about future supply caused wholesale and retail fuel prices to quickly spike after Katrina.

Because Arizona imports the vast majority of its gasoline from refineries located in California, New Mexico and West Texas, it seems counterintuitive that it would be impacted significantly by supply problems on the Gulf Coast. In this case, however, the natural disaster was so great that it impacted the supplies of refined gasoline across the country. Arizona receives approximately 52 percent of its motor gasoline from the East Line.¹¹ Fuel on the East Line is produced by refineries located in New Mexico and west Texas. Those refineries probably faced rising costs for their inputs, including crude oil and blend stocks, and passed those price increases on to their customers. Arizona's average price would reflect those increases.

Even areas not directly affected by a supply disruption face increased prices in a Katrina scale event, because every state is part of a national, networked market for gasoline. A reduction of supply in one area of the country often means tighter supply in other areas the market pushes product to the location where it is most valuable. In 2003, when the pipeline between Tucson and Phoenix burst, national prices increased somewhat as excess supply and tanker trucks were dispatched to Arizona.

¹¹ California Energy Commission Report March 14, 2002. Fuel shipments include motor gasoline, diesel and jet fuel.

C. Branded-Only Supplies and Allocation

In late August and early September, when gas supplies were dwindling and future supply was uncertain, branded Arizona wholesalers began selling gasoline to their branded customers only. They were also allocating supply among their branded customers by delivering only a fraction of their needs to keep as many customers supplied as possible.

Unbranded refiners also allocated supply among their customers. The availability of unbranded product was reduced, in some cases by half. Unbranded marketers and retailers, therefore, had to turn to the tighter, more expensive spot market for supply – if it could be found. As the L.A. spot price soared in the aftermath of Hurricane Katrina, Arizona wholesalers and retailers who had to buy gasoline on the spot market paid extremely high prices for gasoline, if they could get it.

D. No Evidence Found that Retailers Made Misrepresentations About Availability of Supply

This Office received information that a gasoline retailer allegedly misrepresented that it was out of gasoline after Hurricane Katrina to take advantage of the increased prices that would undoubtedly follow the Hurricane. It was also alleged that the retailer had made misrepresentations about valley-wide supply problems to divert attention from its own inability to keep its stations adequately supplied. To determine whether these allegations were true, a consumer fraud CID was issued to the retailer.

The retailer produced voluminous documents that demonstrated it did not misrepresent that it was out of gasoline. Documents produced by other CID recipients showed that supplies were tight for many retailers and the retailer's statements were accurate. Thus, the retailer did not misrepresent the Arizona supply situation in its public statements.

III. CONSUMER DEMAND INCREASED IN RESPONSE TO HURRICANE KATRINA

Based upon the inventory and sales data ATU reviewed, consumer demand for gasoline in Arizona nearly doubled in the days immediately following Hurricane Katrina. With memories of the shortages resulting from the 2003 pipeline break, consumers began topping off their tanks as early as Monday, August 29, 2003. The just-in-time delivery system cannot handle spikes in consumer demand without increasing prices. Several of the CID recipients reported pump and station outages of various durations, from just a few hours to a few days. Documents produced to the Attorney General's Office indicated that certain gasoline marketers could not meet the increased consumer demand because the pipelines were full.

IV. PROFITEERING

A. Increased Refining, Wholesale and Retail Margins

Gasoline prices skyrocketed after Hurricane Katrina. On August 1, the average price of regular unleaded gasoline in the United States was \$2.28 per gallon. On September 6, it was \$3.04. In Arizona, the average price of a gallon of regular unleaded gasoline was \$2.39 on August 1. By September 6, it was \$3.12.

Rising crude prices could not be blamed for the immediate wholesale and retail price increases. The nation was experiencing a refined gasoline, not a crude oil, shortage. The price

of U.S. West Texas Intermediate crude on August 1, 2005 was \$61.51. On September 1, 2005, it was \$69.91, an increase of 13.6 percent. The crude oil price increase was both temporary and slight when compared to the sustained retail price increases (approximately 30 percent) that occurred over the 10 weeks following the hurricane. By the end of October 2005, crude oil spot prices fell to pre-August levels, while retail prices remained much higher than their pre-Katrina levels.

While crude prices did not play a significant role in the Katrina-associated price spikes, refiner margins did. According to a report published by the California Energy Commission, average gross margins for California refineries increased 135 percent around the time Hurricane Katrina hit.¹² On August 23, 2005, average California refiner gross margins were 49 cents per gallon. By September 1, however, they were \$1.15.

Arizona gasoline wholesalers and distributors typically have gross margins of 8 to 12 cents per gallon. Data provided by *certain* Arizona wholesalers and distributors indicated that they were able to increase their gross margins to 20 or 30 cents per gallon on *some* sales post Katrina. The evidence is not sufficient to say that every wholesaler's gross margins increased as much following Hurricane Katrina.

Doubling or even tripling of profit margins during or after a supply disruption is not illegal in Arizona. Though hundreds of Arizona consumers asked the Attorney General's Office to take legal action against retailers who significantly raised their prices after Hurricane Katrina, without an anti-price gouging law, there was no legal basis for such action. The Attorney General's Office had no legal authority unless fraud or collusion was involved in the price spikes. Other Attorneys General, such as Florida, had anti-price gouging laws that enabled them to halt unconscionable price hikes after Hurricane Katrina and to obtain restitution for consumers who were charged unconscionable markups over cost.

B. Replacement Cost Pricing

Responding to accusations of price gouging, industry trade associations justified retailers' immediate price hikes in the aftermath of Hurricane Katrina as "replacement cost" pricing. According to this theory, retailers must raise their prices to earn enough money to pay for their next shipment of higher priced fuel. Unfortunately for consumers, retailers only adhere to "replacement cost" pricing when prices are going up. They are very slow to lower their prices as the supply emergency abates and replacement costs decrease, resulting in sustained higher profits.

Every segment of the oil industry, including refiners, wholesalers, distributors and retailers, realized higher gross margins in the aftermath of Hurricane Katrina. Throughout the summer, Arizona's supply situation was tight, but gross margins for the businesses that responded to the Attorney General's CIDs were constant – between two and ten cents per gallon. After Katrina, however, gross margins increased as much as two times or more.

Such pricing behavior supports the need for anti-price gouging legislation. Note that the biggest profit taking occurred at the refinery level. States that do not have refineries may not have jurisdiction to bring legal action for violations of state anti-price gouging laws. For this reason, a national anti-price gouging statute, which would give federal and state enforcers the authority to prosecute refiners, might curb such behavior in the future.

¹² The gross margin includes costs and profits.

V. Arizona/California Price Inversion

Arizona's average retail price for a gallon of regular unleaded gasoline exceeded California's from approximately September 6, 2005 to approximately September 14, 2005. Based upon the information learned from the Attorney General's investigation, there are two factors contributing to this extraordinary phenomenon – California's supply independence and its large number of branded suppliers.

Though California's geographic isolation from other supply sources and specialized blend are usually blamed for its high prices during normal supply situations, its geographic and blend isolation may have actually protected it from the huge price increases seen in Arizona and elsewhere across the country. While Arizona's prices increased 51 cents in the wake of Hurricane Katrina, and some states' prices increased more than 70 cents per gallon, California's average price only increased 32 cents.¹³ California boasts 21 refineries that reportedly operate at 95 percent capacity and produce about 42 percent of the gas used in the state, with the rest imported from Alaska and countries overseas – only a small amount originates from the Gulf Coast.

During normal market conditions, unbranded gasoline is less expensive than branded gasoline and unbranded retailers usually sell their gas at lower prices than their branded competitors. When supply tightens, as it did in the aftermath of Katrina, refiners pull back their unbranded supply to ensure they have enough supply for their branded stations. As a result of these refiner actions, unbranded supply is severely curtailed or non-existent and an inversion occurs, where unbranded gasoline, which has suddenly become scarce, becomes more expensive than branded gasoline.

Arizona's prices increased more dramatically than California's because of the relatively large number of unbranded stations in Arizona. Based on the information provided in response to the CIDs and other market research, approximately 50 to 55 percent of Arizona's gasoline stations are unbranded. In California, only about 20 percent of the retail stations are unbranded. During normal market conditions, the high percentage of unbranded stations that sell cheaper gasoline helps keep Arizona's prices lower than California's. During supply disruptions, 80 percent of California's retail stations are able to purchase less expensive, branded gasoline, while their counterparts struggle to find supply and pay a premium for it.

To test this theory, the prices a major refiner charged one of its Arizona branded stations were compared to the prices it charged an unbranded retailer for unbranded gasoline. A dramatic unbranded price spike occurred after Hurricane Katrina. On September 2, 2005, the unbranded retailer paid 57 cents more per gallon for unbranded gasoline than the branded dealer paid for branded gasoline. Nine days earlier, on August 24, the unbranded retailer paid 4 cents less per gallon than the branded station had paid.

Conclusion

Arizona saw some of the nation's highest gasoline prices in the summer of 2005. For most of the summer, the high prices were caused by conditions unrelated to Hurricane Katrina, namely an extremely tight supply situation resulting from chronically low gasoline inventories

¹³ According to prices posted on Gasbuddy.com

and pipeline and refinery problems. Post-Katrina prices were high because of actual supply problems, increased consumer demand and profiteering.

Through the post-Katrina period, profit margins realized by every segment of the oil industry were two to three times their normal margins. ATU's investigation uncovered no illegal activity on the part of Arizona wholesalers or retailers. The fact that these businesses were able to legally increase their profits while Arizona consumers and small business struggled to pay the higher gas prices underscores the need for national and state price gouging laws. Arizona's antitrust and consumer protection laws offer little or no protection against these practices.