

RISING DIESEL AND COMMODITY PRICES MEAN HIGHER GARBAGE AND RECYCLING COSTS



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Introduction

During 2005, the average retail price of diesel fuel skyrocketed from \$1.93 per gallon in January to \$3.15 per gallon in late October. This 63 percent increase sent a shock wave throughout the solid waste industry. The National Solid Wastes Management Association (NSWMA) estimates that more than \$2 billion was spent on diesel fuel during 2005 to collect trash and recyclables in the United States. Because of long-term contracts and other restrictions, the 2005 diesel cost increases were not always easy to pass on to customers. While the price of diesel has declined from its post-Hurricane Katrina peak, it remains much higher than it was in the 2000-2004 time period. Experts project prices will remain high for the foreseeable future.

In addition to the major pinch felt at fuel pumps, waste management companies have experienced other commodity-related price increases, such as higher vehicle and container costs due to steel and resin price increases, higher vendor fees for delivering supplies and services, more expensive tires and other vehicle parts, and increased utility costs.

This paper examines these cost increases and the driving forces behind them, considers possible future trends, and suggests strategies to minimize any adverse impacts.

Reasons for Rising Diesel Prices

Diesel prices increased steadily during late 2004 and 2005. Increased global demand for diesel, especially from rapidly developing countries (e.g., China), "fueled" these price hikes. The increased use of diesel vehicles in Europe and elsewhere was another contributing factor.

Then, in August 2005, Hurricane Katrina shut down a significant amount of U.S. crude oil refinery capacity and pipelines that transport fuel from the Gulf Coast to other parts of the U.S. Less than a month later, Hurricane Rita caused additional damage. As a result, about 30 percent of the Gulf Coast oil infrastructure was off-line. The imbalance between the ability of oil refineries and pipelines to refine and deliver fuel products and demand caused an immediate and substantial spike in fuel prices, including diesel. While most media attention focused on the temporary increase in gasoline prices to over \$3.00 per gallon, diesel prices rose higher, peaking at \$3.15 per gallon.¹ This increased operational costs for solid waste companies.

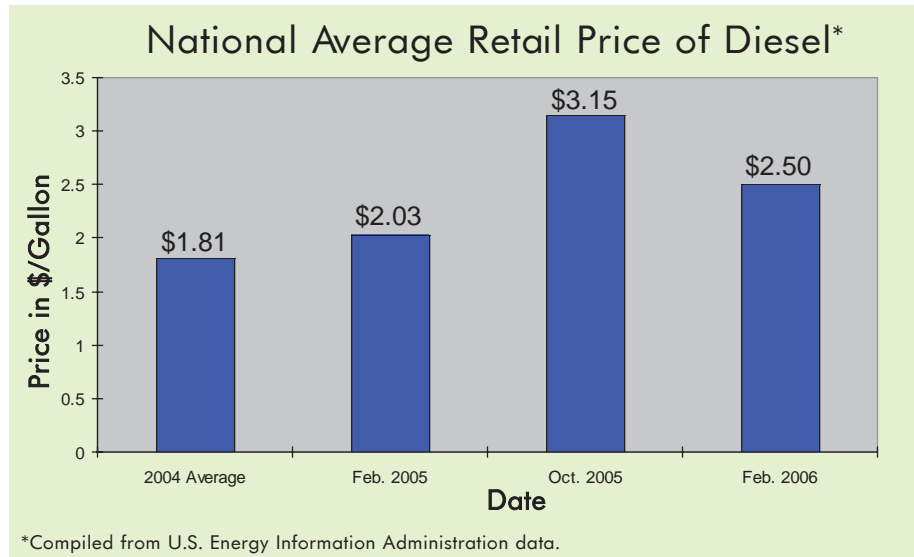


Photo by the U.S. Department of the Interior.

Oil and gas facilities along the Gulf Coast were damaged by Hurricanes Katrina and Rita causing prices to rise across the U.S.

While the price of gasoline consistently fell in the months after Katrina and Rita, diesel prices declined more slowly because of a number of factors. First, gasoline prices traditionally decline in the fall as demand drops due to the end of the summer driving season. By contrast, diesel prices tend to increase in the fall when cold weather causes increased demand for home heating oil, which is very similar to diesel. Second, the immediate political and media spotlight on gasoline prices following Katrina lead to a flood of gasoline imports. Third, when Gulf Coast refineries came back on-line, they primarily produced gasoline not diesel.

As a result, by December 2005, diesel prices had fallen 23 percent, even though gasoline prices had dropped more than 30 percent from their post-Katrina peak. In February 2006, the average national price of diesel fuel in the United States was \$2.50 per gallon. Despite the post-Katrina decline, the cost of diesel was still nearly 70 cents per gallon higher than the average cost of diesel in 2004.



A combination of factors strongly suggest diesel prices will remain at high levels. According to the U.S. Energy Information Administration (USEIA), crude oil prices are expected to remain in the \$60 to \$65 per barrel range during 2006.² This normally translates to diesel fuel in the \$2.30 to \$2.60 per gallon range. In addition, the U.S. Environmental Protection Agency's (EPA) regulations requiring cleaner diesel fuel for trucks and buses are expected to increase the price of diesel in various regions starting in mid-2006.³ These regulations require a reduction in the sulfur content of diesel from 500 parts per million (ppm) to 15 ppm. Refineries have until October 15, 2006 to make "ultra low sulfur diesel" (ULSD) available for sale at the pump, but some retailers may phase in ULSD prior to that.

The transition to ULSD and increased costs associated with creating a new distribution system for ULSD will increase diesel costs and create some local supply problems and volatile pricing. The EPA estimates that the ULSD rule will result in price increases of up to 13.5 cents per gallon between 2007 and 2010.⁴

Limited U.S. refinery capacity is another factor contributing to higher diesel prices. Because of more stringent regulations and globalization, oil companies have not increased refinery capacity in the U.S. to satisfy increasing domestic fuel demand. Although a few companies have announced their intent to expand capacity at some refineries, these expansions will take several years to come into effect.



Oil companies in the U.S. have not increased capacity to satisfy the fuel demand causing higher prices.

Impact on the Solid Waste Industry

The impact of higher diesel fuel prices continues to be significant for all solid waste and recycling haulers, regardless of whether they are in the public or private sector. A typical garbage or recycling truck gets 2.8 miles per gallon and uses 8,600 gallons of fuel per year.⁵ With an estimated 136,000 collection trucks in the United States, nearly 1.2 billion gallons of diesel are used annually to collect garbage, recyclables, and compost.⁶ At \$2.50 per gallon, this means solid waste haulers will spend more

than two billion dollars on diesel fuel in 2006. The nearly 70 cents per gallon (38 percent) increase in diesel prices between 2004 and February 2006 translates into an approximate increase of more than \$800 million in annual operating costs on the collection side of the solid waste industry.

"Higher diesel prices have dramatically raised our cost of providing service to customers," explained Mike Paine, President of Paine's Inc. (Simsbury, Conn.). He added, "Our diesel expenses are up 120 percent from Fiscal Year 2004."

At \$2.50 per gallon, solid waste haulers will spend more than two billion dollars on diesel fuel in 2006.

Jim Perry, President of Waste Industries, Inc. (Raleigh, N.C.) said, "We use 27,000 gallons per day of diesel and there was a \$4 million fuel expense increase in 2005 compared to 2004." He continued, "There was a \$1.4 million increase from 2004 to 2005 during the third quarter alone."

Transfer stations also are affected by higher diesel prices. Transfer operations often subcontract with third-party haulers to take waste to a disposal facility. These haulers have frequently passed their increased diesel costs on to transfer stations. In addition, transfer stations use diesel in the heavy equipment operated to process solid waste.

While some transfer stations responded by imposing fuel surcharges on waste collection companies, others were unable to pass on these costs because of contract requirements or market forces.

Other Commodity-Based Cost Increases Add to the Problem

Solid waste companies have seen other cost increases in recent years as the price of basic commodities rose. The price of steel increased substantially in 2003 and 2004. As a result, the average price of a solid waste collection vehicle increased by \$10,000 to \$25,000. Tires have also become more expensive because of higher rubber costs and an increase in the federal excise tax.⁷ Mike Paine reported, "Four years ago a 4-yard dumpster cost \$500. During 2005 the same sized dumpster cost \$625, and freight doubled from \$20 to \$40 per can."

Other companies, including cart manufacturer Schaefer International Inc. (Charlotte, N.C.), reported higher supplier shipping charges. "Since August 2005, our supplier fuel surcharge increased from about 10 cents per mile to more than 40 cents," said Mike Knaub, Sr., Vice President and Managing Director. He noted, "Component parts such as wheels, metal bars, and axles, are also up."



The cost of steel and tires has increased significantly over the past few years.

In addition to paying thousands of dollars more per vehicle for new truck engines designed to meet ULSD air standards, the fuel economy of such engines is about 3 percent lower than the old engines.⁸ With an estimated 136,000 trucks paying approximately \$2.50 per gallon for fuel to collect solid waste and recyclables, the public and private sectors will incur nearly \$100 million in additional annual fuel costs due to lower gas mileage associated with cleaner burning engines as they update their fleets.

Higher prices for plastic resins used to make bins and carts have also affected the solid waste industry. Resin prices have always had peaks and valleys. During the winter months they typically go up because they are tied to home heating oil prices. Mike Knaub observed, "During the later part of 2005, resin prices were higher than they have ever been in my 30 years in the cart business."



The price of plastic resins used to make garbage containers is at an all time high.

The resin price spike was caused by a number of factors. In August 2005, Exxon Mobil was forced to shut down a manufacturing facility in Canada for two weeks. Then Katrina and Rita forced byproduct plants in the Gulf Coast region, responsible for the manufacturing of high density polyethylene (HDPE) plastics, to temporarily shut down. "The combination created a double whammy on the price of resin," according to Mike Knaub. One solid waste company says it pays up to \$8 more for a 95-gallon cart due to increased resin prices.

Contract Issues -- Unforeseen Price Increases

The extent to which higher diesel and other cost increases adversely affect waste companies depends upon the identity of their customers and the specific language in their customer service contracts.

Municipal Service Contracts

Adding a fuel surcharge to municipal service contracts to address diesel cost increases can be done in different ways. Sometimes a sliding scale is applied that corresponds with incremental fuel price increases. For example, a 10 percent fuel price increase may result in a service charge increase on a cents per home basis for residential customers, a dollar per month or cubic yard basis for commercial customers, or a cents per roll off pull for industrial customers.

To obtain fuel surcharges, benchmark tracking of diesel prices is desirable, along with a provision that a surcharge is triggered if diesel prices reach a certain amount above the benchmark on either an absolute or percentage basis. One company official noted, "If surcharge language is absent and the customer won't budge from the existing contract, we will figure a much higher cost of fuel to offset such costs in future contracts."

Even if a contract does not authorize increases to reflect higher fuel costs or is silent on the subject, haulers can seek an increase. "It is important to discuss the issue with your municipal customer," said one hauler. He added, "Many local governments are well-intentioned, reasonable, and open to addressing the issue."

Some haulers have sought fuel surcharges or other price adjustments from their customers, but have been constrained by various factors. These include a lengthy political process (e.g., by the time a request gets through a city council, three months may have passed and the diesel price may have changed); a quarterly billing cycle (e.g., customers are billed in advance on a three-month cycle); and inflexible price adjustment provisions (e.g., the contract authorized a small annual price increase that did not cover the increased diesel costs of 2005).

Commercial Service Contracts

Service contracts with commercial customers may be less challenging to adjust for higher fuel prices because these contracts are typically shorter and have more flexibility. Some commercial customers have been forced to raise their prices in response to increased fuel prices and other costs and understand that their waste hauler must do the same.

Commercial contracts often have standard service agreement language, including automatic fuel increases, whereby haulers can charge more for collection service if diesel prices increase. "Business is a way of life for them and they are therefore more amenable to renegotiate with garbage haulers than municipal customers," explained the president of a large waste management company.

Municipal Responses to Price Adjustments

Whether a municipal customer will address diesel price adjustments in a service contract depends on the government agency. Examples where customers have worked cooperatively with a waste vendor on service price adjustments include:

- ▶ A contract with a town included a provision stating the company could petition for a rate increase. In January 2005, the hauler explained how diesel prices were raising the cost of service and the town agreed to a 6 percent service price increase.
- ▶ A hauler demonstrated to a town that it was providing an increased level of service, consuming more gas, and paying a higher price per gallon. In response, the town granted a 10 to 12 percent increase in the residential service fee.
- ▶ Tacoma, Washington worked closely with its cart supplier to address recent resin price increases, and was receptive to the company's explanation of the situation. The company, in turn, has tried to pass along only the additional resin costs.

Unfortunately, many examples exist of local governments refusing to budge from a written contract. For instance, when a hauler asked a county to consider a service price increase during 2005, the county denied the request because the fuel price was tied to an annual index and the contract did not provide for a mid-contract adjustment. In New York City, where haulers are subject to a cap on what they can charge commercial customers, the City rejected NSWMA's request for a temporary fuel surcharge in response to the post-Katrina spike in diesel costs.

Municipal resistance to contract adjustments is caused in part by the municipal budget cycle. Once a local government establishes its annual budget for solid waste services, it is very hesitant to increase taxes or fees to pay for unanticipated cost increases. One approach municipalities can take to compensate for unforeseen price increases is to be more generous when negotiating the following year's contract. For multi-year contracts, local governments may be willing to make an adjustment in future years. Future relationships may be hurt if a rigid attitude is taken. Rigidity can



Fuel price increases cannot always be passed on to customers because of contract restrictions or political constraints.

make the hauler-customer relationship colder and less cooperative. Further, waste collection costs can become a political issue and election cycles can further delay the decision-making process.

"Acts of God" Considerations

Waste hauling companies are quick to respond to natural disaster cleanup efforts. However, they have not had much success in using the Acts of God ("force majeure") clause in their contracts to increase their service fees.

Several waste companies have looked at the force majeure issue as it applies to diesel price increases and determined that while they had to pay a higher price for fuel, this did not affect their obligations under their service agreement because fuel was still available for purchase. "We decided that we had to stick with the contract, even though in some cases we were losing \$100,000 per month," said an official from one company. "Force majeure language is found in many municipal contracts, but whether or not it applies when diesel prices spike as a result of a natural disaster, is a very difficult argument to make," added Jim Perry, President, Waste Industries. He added, "We've found that it's better to talk about rising truck costs and other price factors beyond our control."



While waste companies serve their communities by responding to natural disasters, such as hurricane debris cleanup, they have difficulty adjusting fees to cover increased costs from these events.

An exception to the rule is provided by Schaefer International, where its resin supplier experienced a disruption in operations, claimed force majeure, and cut Schaefer's allocation. Service disruptions of this nature are different than the diesel price increases impacting haulers and are more amenable to a successful force majeure claims.

Strategies for Success

A waste company's ability to accurately track diesel price trends is essential, particularly for future contract-related discussions. As discussed above, crude oil prices are predicted to remain high for the foreseeable future, and the federal requirement to use ULSD by late 2006 will add to diesel costs.

Several companies cited the use of the USEIA's "Weekly Retail On-Highway Diesel Prices" index (<http://tonto.eia.doe.gov/oog/info/wohdp/diesel.asp>) as their tool to track diesel prices. That index provides average weekly prices for nine regions and the U.S. as a whole. These companies feel that it is critical to use standardized tracking sources that have credibility in the eyes of their customers. Fuel adjustments need to be transparent to customers as the price of diesel fluctuates. Jim Perry noted, "Ideally, it should be determined on a set period basis and linked to an acceptable index." He added, "A fair approach that's understandable by all parties is what's desired." The U.S. Bureau of Labor Statistics consumer price index (www.bls.gov) can also be used to track prices.

Some companies reduced their exposure to the 2004-2005 diesel price increase by hedging -- paying a premium to buy fuel in future years under long-term contracts. With recent diesel price increases, these hedges will become much more expensive in the future.

Budgeting for future diesel prices is common practice in the waste industry. However, the accuracy of such forecasts is limited due to the unpredictability of future events and circumstances beyond the industry's control. Companies will now be paying closer attention to hurricanes that could harm oil refining capacity and infrastructure in the Gulf of Mexico. According to the National Weather Service, the U.S. has been in an active hurricane cycle since 1995. These cycles usually last 15 to 35 years.

Conclusion

The diesel fuel spike of 2005 significantly increased fuel costs for solid waste companies. While prices have declined from their peak, higher diesel costs appear to be a fact of life for solid waste companies. Combined with increased container, cart, and vehicle prices caused by higher steel and resin prices and future increases related to the introduction of ultra low sulfur diesel, haulers and other industry service providers need to ensure that their contracts with local governments and commercial customers contain sufficient flexibility to authorize price increases.

Notes

1. See the USEIA's Internet site at <http://tonto.eia.doe.gov/oog/info/wohdp/diesel.asp>.
2. USEIA, *Short Term Energy Outlook*, January 10, 2006 -- www.eia.gov/emeu/steo/pub/contents.html.
3. See 40 CFR Parts 69, 80, and 86.
4. See www.epa.gov/nonroad-diesel/2004fr.htm. EPA estimates that the extra refining cost to reduce the sulfur content of diesel to be about 4 cents per gallon.
5. *Greening Garbage Trucks*, Inform, New York City (2003), at 12.
6. *Greening Garbage Trucks*, Inform, New York City (2003), at 12.
7. Transport Topics, December 19 and 26, 2005, at 3.
8. Commercial Waste Management Study Vol. VI - Waste Vehicle Technology Assessment, Henningson, Durham & Richardson (2004) at 28.

This paper was developed by the National Solid Wastes Management Association (NSWMA) with the help of Jonathan Kiser, an environmental consultant. If you would like further information on NSWMA or solid waste transportation issues, contact Chaz Miller, Director, State Programs, at 800-424-2869 or cmiller@envasns.org.

NSWMA is the non-profit trade association representing for-profit companies providing solid and medical waste collection, recycling, and disposal services throughout North America.