Cost & Capital

May 2024

Diesel Category Sourcing Guide

Category Sourcing Guide

- ***Pricing Method –*** Diesel pricing is either priced at a discount to retail or based on an index plus a margin. Different regions are better suited to one method compared to the other.
- ***Retail Competition –*** Less than 10% of US truck stops have only one competitor within 50 miles, while the vast majority of stops compete with three or more stops.
- ***Retail Value Chain –*** Through direct agreements with refineries, fuel retailers can secure pricing below local rack benchmarks. Each supplier's value chain should be reviewed to ensure contract pricing accurately reflects their cost drivers.
- ***DEF Developments –*** The diesel exhaust fluid (DEF) market has experienced volatility over the past few years but pricing has begun to stabilize. Historically high prices should be challenged.
- ***Fuel Optimizers –*** Fuel buyers should ensure their fuel optimizers take all pricing parameters (e.g. rebate thresholds, tax incentives, retailer value chain) and supplier locations into account. Cost elements should be reviewed on a regular basis to limit any supplier manipulation.
- ***Retail Negotiations –*** Structured negotiation templates should be developed and utilized to maximize fuel savings.

Authors

Tom Bokowy
(208) 610-0032
tbokowy@costandcapital.com

Ryan Hatcher
(617) 459-0356
rhatcher@costandcapital.com

Cost and Capital Partners *is a management consulting firm that works with companies to improve cost and capital efficiency. Our client base includes Fortune 1000 companies from the industrial, automotive, electronics, hospitality, process, consumer goods, transportation and white goods industries. We work with clients to improve results and enhance visibility for strategy development. Supplier engagement is a core focus ranging from direct supplier negotiations to market and financial viability assessments. In addition to working with clients to execute sourcing initiatives, we also deliver sourcing training that enables organizations to increase their level of professionalism in supplier engagement.*

For more information please visit our website ***www.costandcapital.com***

Table of contents

Diesel Market Overview

The US trucking industry consumes nearly 50 billion gallons of diesel per year. Depending on the size and infrastructure of the company, this diesel is either purchased in bulk or from retail stations across the country. This paper will examine the practices for reviewing and negotiating a company's diesel spend. The primary focus will be on agreements between large (i.e. $500M USD+ in annual sales) trucking companies and major truck stop chains. Analytical and negotiation strategies that can typically save up to $0.10 per gallon will be reviewed.

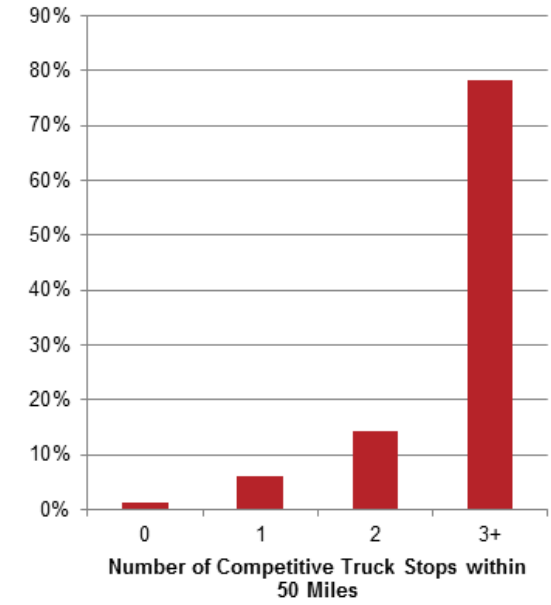
Bulk Purchase

Trucking companies with operational hubs that have large storage tanks may be able to purchase diesel in bulk. This fuel is typically purchased from local distributors or fuel rack locations since refinery-direct volume requirements of 25,000 bbl of diesel per order are prohibitive for most diesel buyers. The distributor market is fragmented, which creates an advantage for trucking companies. Fuel from bulk distributors is typically based on a third party benchmark (e.g. OPIS) with logistical costs and margins making up the difference in pricing across suppliers. Many distributors also offer monitoring services to determine when refilling of tanks is necessary.

Retail Purchase

Most small and mid-sized long haul trucking companies have a limited number of operations centers and thus buy the bulk of their diesel from retailers. The truck stop market is largely dominated by Love's, Pilot and TA/ Petro. These retailers have hundreds of locations located along highways across the US. While the truck stop companies differentiate themselves by offering dining, maintenance, recreation facilities and loyalty programs, competition is fierce. As seen in Figure 1, an analysis of 1000 truck stops across the US revealed that less than 10% have only one competitor or less within 50 miles. With proper analysis and knowledge of their spend fuel, buyers can leverage this competition.

Figure 1: **Retail Competition**



Source: Cost & Capital Analysis

Fuel Optimizers

Software that analyzes routes and existing agreements to develop route plans or fuel solutions is widely used in the trucking industry. This software can generate value for companies in the early stages of the fuel management lifecycle. Monitoring and encouraging driver compliance can help companies adhere to contract terms and work towards volume discounts or rebates. However, while optimizers are useful to trucking companies, they can also be manipulated by fuel providers. As previously noted, the vast majority of fuel stops have at least three competitors within a 50 miles radius. Fuel companies with a good understanding of their customers' routes will be able to estimate the volume potential in each major market. If they feel there is significant opportunity to gain volume at a given location, they may make small adjustments to their pricing to test the optimizer. In many cases, a $0.005 per gallon reduction in pricing can lead to significant volume shifts. Since many contracts are structured so that fuel providers can change pricing on a daily basis, customers might not notice these small changes. More troublesome is the fact that in less competitive markets, suppliers are likely to raise prices until they notice small volume reductions. Buyers should be aware of these practices and perform regular audits to ensure changes in local prices are justified.

Diesel Exhaust Fluid

DEF (Diesel Exhaust Fluid) is an emission control liquid used to lower nitrogen oxide emissions. DEF is held in separate tanks and sprayed into exhaust to break down the NOx into nitrogen and steam. Its use greatly increased in the US when the EPA implemented new environmental standards in 2010. DEF is 32.5% urea

and 67.5% water. The early to mid-2010s saw rapid increases in production, leading to a drop in market prices. The fact that urea is a derivative of natural gas, which saw a boom in US production, also helped reduce cost drivers. However, over the past few years, volatility greatly increased. China tariffs, the war in Ukraine, production shutdowns in China, and shipping constraints caused local DEF prices, at times, to become somewhat uncoupled from global urea indices and contract complexity to increase. Urea prices have relatively stabilized over the past year, however at levels that are still ~40% higher than in 2019. As of May 2024, retail DEF was priced at $4.18 per gallon before rebates. This is significantly higher than the bulk (i.e. tanker quantities or greater) market price. Retailers will typically mention the fact that they had to install infrastructure to distribute DEF at their truck stops, and that prices cannot be reduced until this investment has been recovered. By maintaining high margins on DEF, some retailers have already recovered the typical investment of $25,000-$40,000 per lane, even though these investments are typically depreciated over a 15-year period.

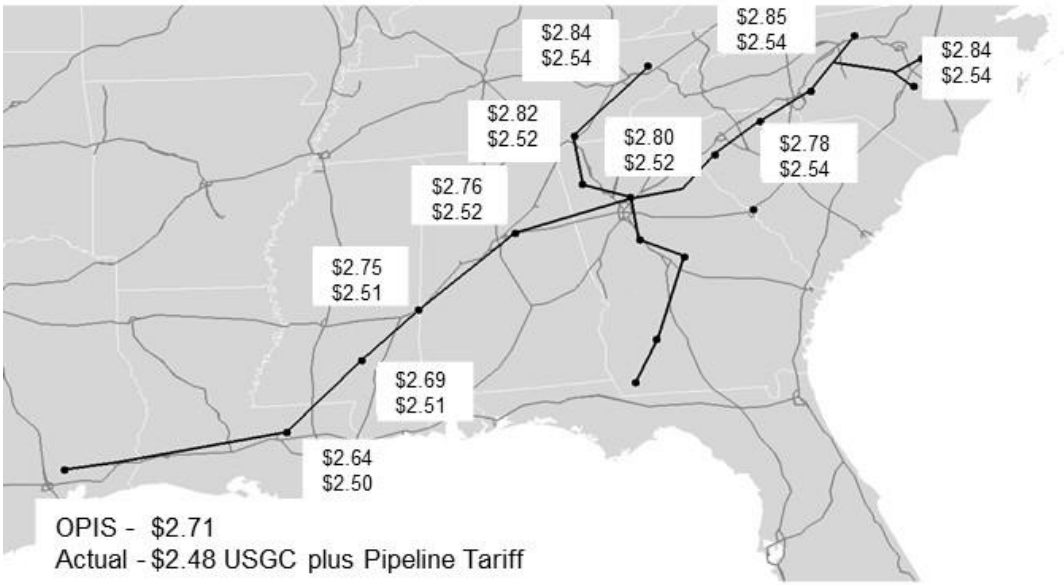
Market Practices

Retail and Cost Based Pricing

Diesel agreements can either be retail or cost based (or oftentimes a combination of the two). Retail-based pricing typically is updated daily and includes a discount to an individual station's posted pricing. Cost-based pricing is based on a base price, typically from a local fuel rack, plus the station's other cost elements. These elements typically include transportation, taxes, and margin or a 'pump fee'. Depending on a station's leverage with a local rack or even refinery, the retailer may be able to offer cost minus pricing. This is because they can purchase fuel below the average rack price in a particular market.

Figure 2 illustrates the advantage that large retailers may be able to achieve if they are able to purchase fuel directly from gulf coast refineries. The top price in each box is the average OPIS rack price, while the bottom price is gulf coast pricing plus pipeline transportation fees. Since OPIS rack pricing is based on surveys for each market, it merely represents an average price for any diesel buyer in the area. Larger retailers with greater leverage and infrastructure should be able to purchase diesel directly from refineries at lower prices. Gulf pricing plus pipeline fees and rack unloading fees is typically $0.10 to $0.30 lower than local OPIS rack pricing. Buyers should consider such advantages when developing cost plus and retail minus agreements.

Figure 2: **OPIS Rack vs. Value Chain Pricing**



Source: Cost & Capital Analysis

Instead of accepting a retailer's cost elements, fuel buyers should audit the value chain in select markets. For example, have freight costs been steady or do they fall during times of declining fuel prices? Some retailers own their own truck fleet and may be more insulated from market swings. Also, it is important to verify the location of the nearest fueling rack and whether the retailer pulls fuel from that rack. Pricing from their fuel rack or refinery agreements should be audited on a regular basis. Court cases involving retailers (e.g. Pilot)

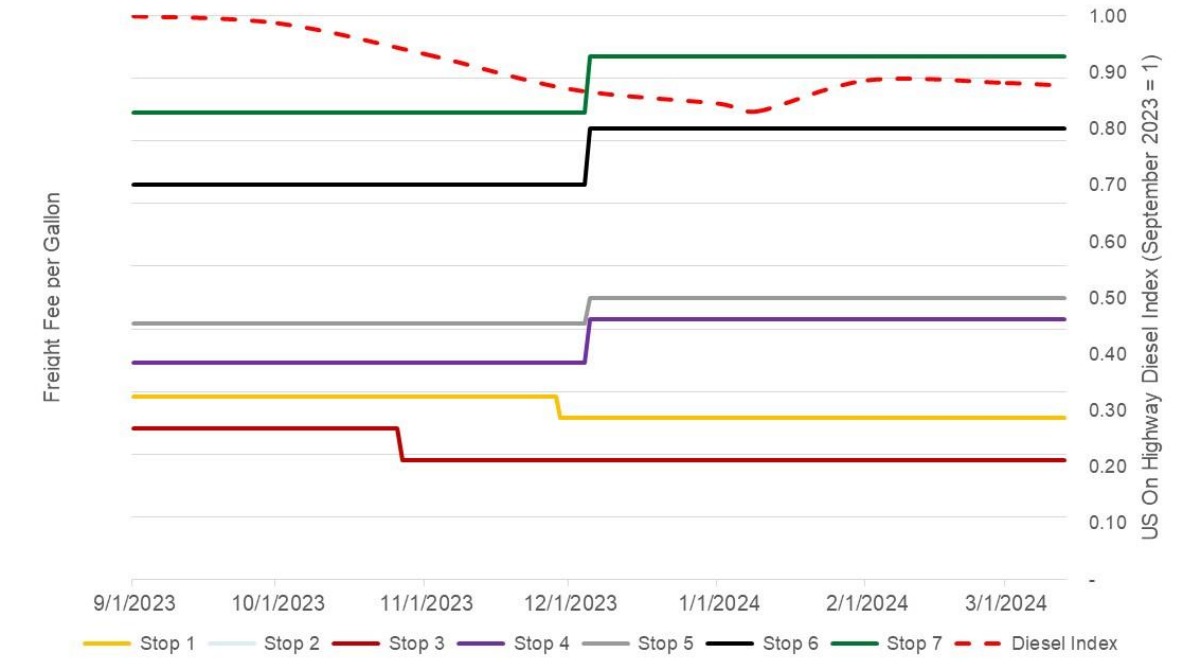
have shown the impact of merely trusting a retailer to provide correct pricing and relevant rebates to customers.

Optimizers

Fuel optimizer programs take a company's current agreements into account when developing fuel solutions for drivers. Ideally drivers will be directed to stations with the best pricing along the route. If these solutions are not frequently audited, they may be susceptible to manipulation from fueling providers. The providers can monitor their weekly volume and make minor adjustments to pricing components (e.g. freight) until an increase in volume is detected. Conversely, providers can make increases to pricing up until the point they begin to lose volume. Identifying these inflection points provides leverage to the suppliers since it helps them identify the margins their competition is providing to a particular customer. It is important for fuel buyers to maintain transparency in the value chain cost elements so that pricing adjustments can be proactively addressed.

As seen in Figure 3, a client reviewed its fuel spend in major markets, one of which is illustrated below. In this example, freight fees were examined. It was determined that providers were incrementally increasing freight costs even though the price of on highway diesel had decreased over the time period. It was determined that fuel providers were increasing freight in less competitive regions and doing the opposite in more competitive areas. The client was able to address this disconnect and achieve price concessions from the supplier.

Figure 3: **Cost Element Analysis**



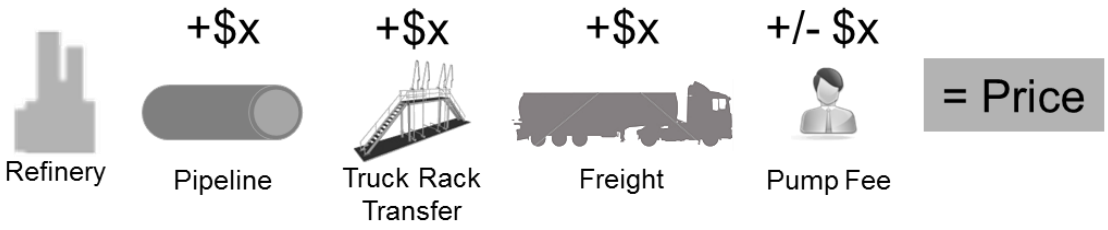
Source: Cost & Capital Analysis

Analysis Approach

Value Chain Analysis

Most fuel retailers either have direct agreements with refineries or receive their fuel from local racks. This rack price typically acts as a baseline for cost plus agreements. Additional cost elements include freight, underground storage tax, federal tax, state tax, local tax and pump fees.

Figure 4: **Fuel Value Chain**



Source: Cost & Capital Analysis

Cost elements such as federal and state taxes should be removed from the analysis when comparing retailers. This primarily leaves the OPIS rack price, freight and pump fees to examine. Freight fees should be benchmarked on a per mile basis from the rack to the retail station. As previously mentioned, at times retailers may charge higher freight prices in less competitive areas. It is also worth noting that in declining oil markets, reduced fuel surcharges should cause a reduction in freight rates. Examining historical freight rates in key markets will reveal whether or not suppliers that increased rates while oil prices went up decrease them as oil prices fall.

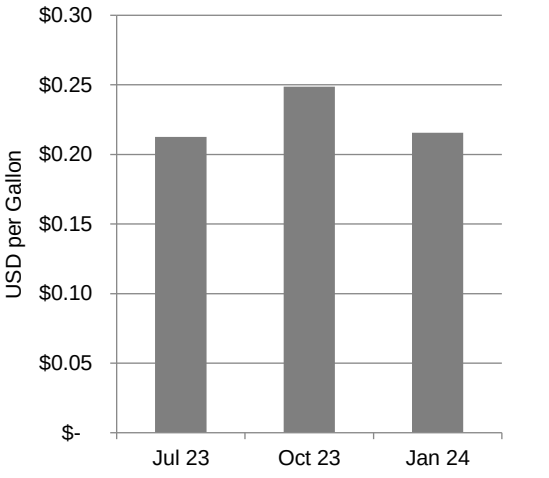
Tax Incentives

In most cases, the state taxes for diesel fuel net out over a long distance route. This is due to the fact that states prefer to receive tax funds based on usage rather than gallons filled. The International Fuel Tax Agreement forces trucking companies to file quarterly tax statements to the International Fuel Tax Association (IFTA). IFTA acts as a clearinghouse to ensure that the taxes are paid properly. For example, if a truck fills its tank in Dallas, TX and proceeds to Vicksburg, MS, the company would report the miles driven in each state in their quarterly report. A portion of the taxes paid at the time fuel was filled in Texas would likely be credited to the company's account and taxes for Louisiana and Mississippi would be debited. Some states, such as Georgia have additional taxes that the state keeps regardless of the amount of miles driven. Many city and county taxes also exist nationwide. Buyers should ensure that their fuel optimizers remain up to date to account for these situations.

Biodiesel Rebates

Several states, notably Illinois, have tax rebates depending on the amount of biodiesel that is blended with the fuel. These rebates are paid to fuel providers rather than fuel buyers (i.e. truck stops, not drivers). For this reason, it is important to track the type of fuel that is being purchased in Illinois. The Illinois biodiesel tax credit rebates the full 6.25% excise tax for diesel blended with 14% or more biodiesel (11% during winter). At prices of $4.00 per gallon, this translates to 25 cents per gallon. Fuel buyers should make sure this extra element of the fuel value chain is accounted for in their contract. Typically, this can be accomplished by reducing the pump fee by the amount of the tax rebate. Since higher ethanol amounts translate to lower fuel economy, it is vital that trucking companies at least manage to capture the value of these rebates.

Figure 5: **B20 Biodiesel Rebates**



Source: Cost & Capital Analysis

Inflection Points

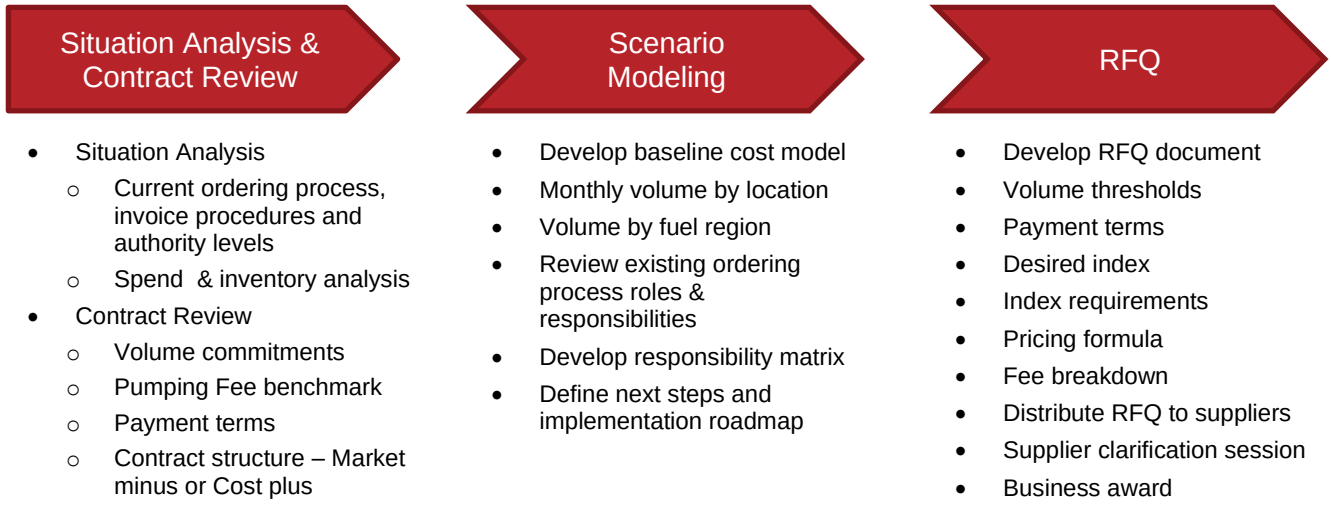
The above components (e.g. value chain, cost elements, tax incentives, volume rebates) must all be combined when performing scenario modeling to determine each supplier's ideal inflection point. This is the pricing point that each supplier will be the most competitive in a given area, while remaining profitable. Several inflection points should be developed depending on the total volume that each supplier might win. These thresholds will help determine when and if optimizers should be skewed in favor of a certain supplier in order to gain enough volume for rebates. Cost & Capital has developed diesel sourcing analysis tools to help clients achieve the best pricing based on existing and future sourcing scenarios.

Project Approach

Project Plan

As outlined in Figure 6, a structured project approach should be applied when reviewing fuel spend. This review typically requires three to six weeks of analysis depending on the company.

Figure 6: **Typical Project Approach**



Source: Cost & Capital Analysis

Situation Analysis & Contract Review

To set a baseline and identify potential opportunity areas, an initial analysis and contract review should be performed. Processes and systems for purchasing fuel should be identified and compliance measured or estimated. Spend and volume developments over the past several years should also be reviewed to identify what sort of commitments might be possible to current or future suppliers.

Existing contracts should be collected and reviewed. Terms such as volume commitments, cost elements, payment terms, rebates and price change mechanisms should be benchmarked across providers. During this analysis, it is important to identify whether or not promised rebates have been paid by suppliers. Price changes should also be documented during this portion of the project.

Scenario Modeling

The main purpose of the scenario modeling portion of the project is to identify how a company's fuel volume can be leveraged. The competitive situation should be assessed in key markets that cumulatively represent 80% of the company's spend. A break point analysis should be performed to identify which price changes will cause significant changes in volume allocation. These analyses will allow a company to determine how much of its volume can be shifted from one supplier to another on a market by market basis. This information is vital when preparing for RFQs and negotiations. By the end of this phase of the project, a savings opportunity should be identified by market by supplier. This target should be utilized in business cases when communicating internally.

RFQ & Implementation

Operational and driver buy-in is critical to the success of any new fuel agreements. Thus, prior to in depth negotiations, the buyer should confirm that the company's drivers are amiable to potentially shifting business to a new supplier. Once internal and external leverage has been identified, suppliers should be contacted. It is typically best to illustrate the suppliers' current volume and how that may change depending on their price competitiveness going forward. The RFQ process is also the best opportunity to secure price transparency. This will be helpful for combatting future fuel optimizer manipulation attempts. A large part of transparency is understanding the suppliers' cost drivers. Thus, it is important to identify whether or not they are able to buy directly from refiners as this can have a significant impact on pricing.

Once a supplier has been selected, volume should be monitored to ensure drivers are utilizing the new supplier. If a fuel optimizer exists, it is also important to test to make sure it can handle all applicable contract terms, especially volume discounts. Once the new contract has been implemented, purchasing and operations should monitor driver satisfaction to ensure that service levels are being upheld at the truck stops.

Conclusion

As a result of following these processes, Cost & Capital has helped fuel buyers achieve significant savings via volume optimization and commercial negotiations. A structured approach to fuel sourcing can maximize leverage by identifying systematic supplier abuses and highlighting savings opportunities. Buyers should perform value chain analyses for each of their major providers and focus on key markets with the majority of spend. Once the value chains have been identified, scenario modeling can be applied to identify key market inflection points. These points of leverage should then be discussed with suppliers. Throughout this process, fuel buyers must keep operations informed. It is critical to have the buy-in of drivers prior to shifting large portions of volume from one supplier to another. Aspects of the suppliers' offerings such as size, amenities and loyalty programs should be taken into consideration to minimize or eliminate any negative impact on drivers.

About Cost & Capital Partners

Cost & Capital Partners works with our clients to support supply chain operations. Our benchmark databases, portfolio of detailed cost models and our scenario modeling tools can be quickly deployed across sourcing organizations to optimize spend and secure savings.