

The Science of Fuel Transportation

Technology Makes the Difference

by Jean Feingold

Increased volatility in petroleum product prices is now a fact of life. Reducing fuel transportation costs, both when acquiring petroleum products and when delivering them to customers, can help make that volatility more bearable for petroleum marketers. Using technology is the key.

Finding the Right Price

Having complete information on petroleum product prices is essential in deciding where and when to buy. DTN's Web-based FuelBuyer application aggregates all the prices being charged by oil companies at terminals in real time and makes them available to oil buyers.

DTN standardizes prices across suppliers and then displays them ranked from lowest to highest for each market. The full price at each rack, including splash charges and freight cost, is clearly shown. "Petroleum marketers must keep up with intraday price changes, or they can't be profitable," Cathy Duncan, DTN's senior product manager of refined fuels, noted.

With this real-time rack intelligence, petroleum marketers can negotiate for better prices from current suppliers or get contracts with lower-priced companies. If the marketer knows a competitor can buy from a lower-priced supplier that they cannot, they may choose to lower their selling price to increase business. Prices change so rapidly now, some marketers have drivers call in when they get to the terminal and then use FuelBuyer to reevaluate which supplier has the current lowest price.

In DTN's system, price alerts, weather alerts, relevant news headlines, a spot ticker and the NYMEX eight-day trends are shown on the main screen. Trend information can help in deciding whether to order now or wait for a better price. Historical prices for the past 30 days let marketers check invoices to determine if suppliers charged the proper price and whether drivers could have gotten a better price elsewhere. DTN can provide electronic invoices, bills of lading and credit card data, which are automatically downloaded into the marketer's computerized accounting system — another cost-saver.

"Reacting to the market is critical," Duncan said. "Smarter evaluation can save \$5 to \$100 on a single load." She cautions that the lowest price may not always be the best one, as it may be offered by a supplier who is out of product.

Supply Chain Software

TelaPoint's TelaFuel Web-based software system combines several components to provide petroleum marketers with the information they need to make more cost-effective decisions. Marketers can monitor underground storage tanks remotely from a central location using TelaFuel, responding as needed to alarms and generating and maintaining compliance reports. Automated tank gauges generate information needed to forecast the next order. By tying that in with information from pricing services, the software can complete the order and communicate with the carrier. TelaFuel tracks orders, reconciles invoices and reports to the marketer's back-office accounting system.

The software checks in-ground inventory, so orders for slower-moving products are minimized while larger loads of more popular products are ordered, reducing transportation costs by optimizing the product mix. Automated price feeds rank supply costs by market or specific sites. Management reporting can review price analysis, rank results and compare planned to actual lift exceptions. Supplier invoices and price quotes are matched to be sure they agree, so invoices can be reconciled faster, allowing marketers to take discounts for prompt payment. Because these functions happen automatically, labor costs are reduced. TelaFuel also incorporates efficient scheduling tools, evaluates internal and external transportation resources and improves marketers' ability to react to unplanned events, making dispatchers more productive.

A wireless component enters information into the system in real time while allowing two-way communication with drivers. This permits easy schedule changes and reduces cycle time for customer billing and driver payroll.

Tank and Truck Monitoring

Knowing how much product is in customers' tanks and only delivering when a relatively full load can be sold is more cost-effective than topping off at set intervals. Monitors like those offered by SMARTLogix's SMARTank make this possible. These small devices use pressure sensors or float gauges to check the liquid level in the tank. The information is sent wirelessly via cellular modem to a Web site accessible from any computer.

These battery-powered monitors, which screw into an unused access hole in the tank, are easily installed by drivers.

They work on all types of tanks, including underground tanks, for which they tap data from Veeder-Root used at c-stores and send it directly to the SMARTank Web site. Multi-tank locations can be accommodated with one master unit linked to RF client monitors on each tank, allowing all the data to be transmitted wirelessly with one transmission.

The SMARTank Web site lists percentage full, location, product and more for each tank, with the emptiest tanks appearing first. Records of average daily usage and when the tank was last filled are also kept, so marketers can decide whether it is safe to wait for delivery if there are scheduling issues without the customer running out. The goal is to deliver the maximum product during each delivery without inconveniencing customers.

“Every time you stop a truck, you must pay for the driver and the truck,” Dan Warren, marketing manager at SMARTLogix, pointed out. “It’s better to wait until a tank needs filling than to ‘top-off’ because the truck happens to be nearby. The monitors give jobbers control over their margins by determining when customers really need filling.”

If the same amount of product is sold with fewer deliveries, it can essentially double a fleet’s capacity. Fewer deliveries mean fewer invoices per customer, another cost savings. Another advantage is that marketers can serve customers in geographic locations far from their headquarters by positioning trucks and drivers in the desired area and pulling from terminals there.

SMARTLogix’s SMARTruck dispatch software system can be used with tank-monitoring systems or independently. It features handheld devices on each truck used for GPS tracking and transaction recording. These devices have integrated barcode scanners to decrease cross-fueling and create higher density fleet fueling routes, along with built-in printers with signature capture so delivery receipts can be left with each load. The handheld walks drivers through the delivery process, including pre-trip inspection, where to load the product, delivery schedule and route. Two-way text messaging allows real-time communication with the office.

Cellular technology lets data move to the truck from the marketer’s back office in real time. Previous orders can be reviewed to determine how much product to deliver. If the marketer also uses tank monitoring, orders are generated automatically. When drivers log out at

shift end, the system sends any incomplete deliveries back to the office for redispatching.

At the main computer, SMARTruck’s planning board can be programmed with information on which drivers and trucks are carded for each terminal, as well as what needs to be dispatched and pulled from terminals. By reviewing the gross margin per hour for each truck and product, thresholds can be set to maximize profit. Dispatchers can see the status of all drivers, trucks and deliveries in real time, including speed, location, idle time, capacity and inventory. By using this system, overtime, administrative costs, shrinkage and data entry errors are reduced.

Technology solutions like these enable petroleum marketers to grow without adding resources, keep more accurate records, respond more quickly to unexpected situations and have more complete information for making decisions. They will benefit almost all petroleum marketers.



Are you losing money?

With fuel prices so volatile, even the slightest delay in price information, an inventory miscalculation or a misrouted tanker can end up costing your company and customers hard-earned dollars.

Designed specifically for the wholesale petroleum industry, our easy-to-use, web-based TelaFuel® software can integrate seamlessly into your daily operations to help you find the lowest prices, refill your tanks at the right times, reconcile invoices, monitor environmental compliance and much more.

Call 1-866-539-5254 today for your free consultation.
Don't wait – TelaFuel can help you save time and money by more efficiently managing your petroleum supply.



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