FUEL MANAGEMENT FOR FLEETS:

MILEAGE IMPROVEMENT AND FUEL THEFT AND FRAUD PREVENTION

by Christopher Hammer

energie · fuel group

PURPOSE

Hello Fleet and Business Managers,

I wrote this guide after speaking with many Energie Fuel customers who wanted to learn how to maximize fuel management within their businesses.

Most business owners and fleet managers possess a wealth of knowledge about the art of trucking, gained through years of hard-earned experience. However, the challenge often lies in effectively leveraging that experience to empower and guide their teams.

The purpose of this guide is to help business owners, fleet managers, and administrative teams engage in more productive discussions with their staff. More importantly, it aims to encourage the adoption of tools and best practices that can significantly reduce unnecessary fuel consumption across your operations.

By applying the strategies outlined in this guide, you can better identify and prevent fuel theft, fraud, and mechanical inefficiencies that impact your business.

I hope you find this guide valuable.

Thank you,

Chris Hammer
Founder and President of Energie Fuel

1 MILES PER GALLON ANALYSIS

Creating a spreadsheet that tracks the average **MPG** for each vehicle is a great way to begin monitoring your fleet's performance. This makes it easier to identify unusual or out-of-pattern driver behavior and investigate it further.

- Classify MPG data by vehicle type and/or engine model year.
- Create a secondary classification based on route characteristics to identify patterns. For example, a route at sea level will typically produce different MPG results than a route through mountainous terrain.

Once you have established your spreadsheet, you can begin analyzing MPG data on a regular basis. We recommend conducting these reviews at a frequency that aligns with your business needs. Depending on your operation, you may choose to analyze MPG performance weekly, biweekly (every 15 days), or monthly.

2 ROUTE ANALYSIS

Before a driver begins their route, **research both the origin and destination of the trip**. This process should also include identifying authorized fueling locations along the route and encouraging drivers to use the most cost-effective fueling options, such as CFN and cardlock sites.

We encourage you to involve your drivers in the decision-making process, as they are the individuals most familiar with the routes they travel. Doing so not only increases their willingness to adopt new operational procedures but also creates an opportunity to develop a driver recognition program that incentivizes and rewards participation and performance.

Before completing your route analysis, wVe also recommend calculating the distance between the starting point and destination. This will help you estimate the number of fuel gallons required to complete the trip and establish more accurate fuel consumption expectations.

3 FUEL TANK CAPACITY CONTROL

To get a better understanding of each vehicle's **fuel tank capacity**, we recommend creating another spreadsheet that allows you to view tank capacity across your fleet at a glance.

One of the most helpful tools available through our fuel card program is the ability to set a gallon limit per transaction. You can set a limit that only allows the driver to fuel the amount necessary to fill the vehicle's tank. A notification will be sent to you and your team if a driver attempts to exceed the allowed gallon limit.

4 HEALTHY RATIO "DIESEL & DEF"

We understand that engine maintenance is a top priority for fleet managers. To help monitor vehicle performance, we recommend creating a spreadsheet that tracks **DEF consumption by vehicle**.

This can be added as a row or column within the same spreadsheet you use to analyze MPG. The goal is to create a formula that calculates the consumption ratio between DEF and diesel fuel. By tracking this data, you can establishv a more accurate baseline for each vehicle and quickly identify unusual or excessive DEF and/or diesel consumption.

As a general benchmark, the average DEF consumption ratio is typically between 2% and 3% of diesel fuel consumption. In other words, for every 100 gallons of diesel consumed, a vehicle will generally use 2 to 3 gallons of DEF.

5 THOROUGH GALLON ANALYSIS

By following the first four recommendations, this fifth step will help you create a spreadsheet that tracks **fuel gallons** pumped versus **fuel gallons consumed**. The objective is to accurately calculate the average fuel consumption for each vehicle. This report can help businesses identify anomalies more quickly and better understand the causes of excessive or unusual fuel consumption.

We recommend generating this report on a regular basis according to your operation's requirements and fleet management needs. Whether you choose to review it weekly, biweekly, monthly, by trip, or by delivery, the key is to remain consistent in your analysis and monitoring efforts.

6 ANTI-SIPHON LOCKS

Another recommendation is to invest in **anti-siphoning devices** for your fleet's fuel tanks. These devices help prevent fuel theft by blocking unauthorized siphoning attempts through the fuel tank's filler neck using a hose.

7 CALIFORNIA DIESEL CONSUMPTION VS OTHER U.S. STATES

For businesses operating outside of California, we recommend **calculating the number of gallons required** for a vehicle to travel from its **starting point** to the first fueling location in a **neighboring state**. This calculation can be performed using the route planning and fuel consumption reports discussed earlier.

When fueling in California, only purchase the amount of fuel necessary to reach the first fueling location outside the state. Depending on the route, drivers may be able to refuel in Arizona, Utah, Nevada, or Oregon after leaving California.

Fueling outside of California may have a positive impact on your fuel tax reporting and overall fuel costs. However, we do not recommend traveling outside California solely for the purpose of purchasing fuel and then immediately returning to the state. Fuel prices in neighboring states are often lower because they are not subject to California's fuel taxes and regulatory costs.

Keep in mind that all fuel purchases made outside of California must still be accurately reported on your fuel tax filings, including any applicable IFTA reporting requirements.

8 TIRE MANAGEMENT

When it comes to **tire management**, analyze and compare the available options. Research into which tires are best suited for the routes your drivers travel. If the driving area does not require tires with severe water or snow traction, choose a more appropriate option. We recommend looking for low-rolling-resistance tires.

On a regular basis, perform the following:

- Check for proper air pressure.
- Rotate tires as needed.

9 CRUISE CONTROL

Our final recommendation is to encourage drivers to use the **cruise control** feature whenever it is safe and appropriate to do so. Cruise control helps maintain a consistent speed, reducing unnecessary acceleration and deceleration.

Many modern vehicles are equipped with advanced cruise control systems that are designed to optimize fuel efficiency. When used properly, these systems can help improve fuel economy, reduce driver fatigue, and promote more consistent vehicle operation.

10 AIR DEFLECTION AND RESISTANCE

If possible, we recommend investing in **aerodynamic equipment** such as air deflectors and air spoilers for your vehicles. This is especially important for larger vehicles, such as vans, box trucks, and tractor-trailers. A properly designed aerodynamic system can help reduce air resistance (drag), resulting in improved fuel economy and overall vehicle efficiency.

For flatbed operations carrying oversized or unusually tall loads, it is important to organize and secure the cargo in a manner that minimizes aerodynamic drag while maintaining proper weight distribution. Reducing wind resistance and ensuring balanced load placement can contribute to better fuel efficiency, vehicle stability, and safer operation.

11 PREVENTIVE MAINTENANCE

Another helpful spreadsheet to maintain is one that tracks vehicle maintenance activities. Consider monitoring items such as **engine oil** and **transmission (hydraulic) fluid changes**. Keep in mind that not all oils, synthetic blends, and full synthetic products are created equally. Be sure to research and select the products that are best suited for your vehicles and operating conditions to help maximize performance and fuel efficiency.

As for DPF (Diesel Particulate Filter) systems, develop a preventive maintenance schedule to regularly inspect and clean these filters. Maintaining a consistent DPF cleaning schedule can significantly reduce the frequency of automatic regenerations, improve fuel efficiency, increase engine performance, and extend the life of the DPF system.

Your vehicle's **fuel system** should also be a priority. Fortunately, fuel quality standards throughout most of the United States help ensure that diesel and gasoline meet acceptable quality requirements. However, contamination and fuel system issues can still occur.

Fuel contamination can happen during fuel transportation, storage, loading, or unloading processes. For this reason, it may be beneficial to use approved **fuel additives** designed to help clean and maintain your vehicle's fuel system and fuel lines.

In addition to fuel system maintenance, regularly inspect and maintain the following:

- Oil, air, and fuel filters
- Radiator and engine cooling system
- Tire pressure and tire rotation
- Fluids, including antifreeze, brake fluid, and windshield washer fluid
- Visual inspections for leaks
- Electrical systems and wiring
- Vehicle lighting systems
- Brake systems
- Engine mounts, transmission mounts, and related components
- Axles, joints, steering components, and lubrication points

Keeping up with preventive maintenance can help reduce downtime, improve fuel efficiency, extend vehicle life, and prevent costly repairs.

ABOUT THE AUTHOR AND COMPANY

Thank you for sticking with me and my team all the way to the end. We sincerely hope that some of these suggestions will help you and your team manage your fleet more efficiently. At Energie Fuel, we strive to provide the support and tools you need to better control fuel-related expenses so you can stay focused on running your business.

While bouncing from job to job in my early twenties, I found myself working in fuel management and the petroleum industry. I was given an opportunity and decided to take it, thinking I would end up like Scrooge by the age of 25. I assumed the industry would be easy, or at least easier than some of my previous jobs, but I was wrong. Life quickly humbled me and taught me that success cannot be driven by money alone. Thankfully, the experience provided valuable lessons and a new perspective that continue to guide me today.
I genuinely enjoy helping businesses by providing valuable products and services. In 2017, Energie Fuel was established with a vision of bringing greater freedom, better tools, and stronger support to the fuel card industry. Through our partnership with Lakeview Petroleum, Energie Fuel Group helps businesses of all sizes and industries reduce their fuel expenses. Together, we offer some of the most affordable fuel card programs, along with bulk fuel, lubricants, DEF supply solutions, and premium fuel additives for a wide range of fleet applications.

I am fortunate to work alongside a talented team that I am proud to be a part of. Together, we accomplish a great deal, and we remain committed to helping our customers succeed.

Thank you again for your time.

Live and work with positive Energie.

Chris Hammer
Founder and President of Energie Fuel