Authentix deploys a fuel integrity program to help Serbia recover millions in lost excise taxes.

THE SITUATION

The Republic of Serbia, a country of over seven million people, is a transit point for many important commodities traveling from Europe to a wide variety of destinations. In 2009, a decrease in fuel excise taxes contributed to a struggling economy.

While the number of fuel stations and vehicle registrations increased, the taxable sale of fuels declined. This alerted officials that fuel fraud, intended to facilitate evasion of excise taxes, was an issue that needed to be addressed.

THE CHALLENGE

By 2013, 1,434,000 tons of diesel had been consumed in Serbia, while only 902,000 tons had been sold by oil companies through wholesale channels, leaving a staggering 37 percent of volume unaccounted for. The Serbia government determined that this disparity could be explained by the practice of two illicit trade patterns:

- Fuel transported is purposely under-measured by manipulation of measurement equipment and falsification of transport documentation. The unaccounted-for fuel is then diverted to the black market, causing a direct revenue loss.

- Fuel is adulterated and sold at lower costs. This practice was harmful beyond excise tax losses, as the introduction of adulterants degraded fuel quality resulting in lower fuel efficiency, harm to the environment, and damage to vehicles and equipment.

RESULTS

- ✔ From 2013 to 2018, excise and VAT revenues increased by 720M€

- ✔ Sales volumes increased 18% for diesel fuel and 14% for gasoline in first 5 months of program

- ✔ Number of failed samples at retail outlet decreased 75%

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The Authority in Authentication

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THE SOLUTION

Authentix implemented a fuel integrity program including fuel markers, sampling and testing at petrol stations, internal stations, depots and refineries, and laboratory testing to confirm the field results.

The Authentix marker chosen for the program is constructed of the same molecular components as the fuel, making it virtually impossible to separate from the fuel once it has been marked and enabling testing to support successful criminal prosecution. Petrol and diesel are marked manually at 14 locations throughout the country. Marker is added into petrol and diesel at auto truck, rail truck, barge and bulk tank levels.

Rapid fuel testing at retail outlets and other bulk storage locations uses Authentix's technologies that allow inspectors to quickly screen all retail fuel stations and immediately determine if the retail fuel has been diluted. Government officials may then choose to act on the results (specifically in cases of repeated failed tests over a period), and/or send samples for laboratory testing and confirmation.

THE OUTCOME

In just the first five months of the fuel marking program, nearly one billion liters of fuel were marked, and the Serbian government saw significant evidence of the program's success, even before enforcement began.

- In the first 5 months of the program, excise revenues increased by over $39M when compared to the same period the year before and sales volume increased 18% for diesel and 14% for gasoline.
- Government fuel excise revenues for 2014 were nearly $161M higher than 2013.
- Failed samples at retail outlets have decreased steadily, now 75% lower than at the start of the program.
- In the first 5 years of fuel marking, total volumes of marked fuel increased by 40%.
- From 2013 to 2018, excise and VAT revenues increased by 720M€.

1. Inspector reads a SMS message on a mobile phone with the information at which petrol station the inspection procedure will be conducted.
2. Inspection team arrives at the petrol station.
3. Inspector uses an electronic gauge to measure the quantity of fuel in each fuel tank.
4. Inspector uses an electronic gauge to measure the quantity of fuel in each fuel tank.
5. Fuel is sampled in accordance with SRPS EN ISO 3170 standard by using a special copper cylinder. In order to avoid the presence of any dirt in the vessel which may affect the sample, the cylinder is rinsed twice before taking samples for analysis. Subsequently, the sample is poured into a bottle. Bottles used only once to avoid contamination of samples.
6. When fuel is sampled from all tanks, bottles are taken to a car where a device for testing is kept.
7. A small amount of fuel from the bottle is transferred by pipette into a separate vial. Each vial is used only once.
8. The vial is put into the machine for analysis and the lid is closed.
9. Basic information about fuel is entered into the device.
10. After one minute and a half, the result is displayed, in this case the inscription MEETS the requirements.
11. All samples are subject to analysis and the results are entered into the report.
12. Upon completion of analyses, the verification sample is entered into the device to check its preciseness.
13. Along with fuel marker concentration, the inspector checks the operability of a fuel dispenser as well, books of account, etc.
14. If everything is in compliance with the requirements, the inspector prepares the inspection report which should be signed also by the head of petrol station.

ABOUT

As the authority in authentication solutions, Authentix thrives in supply chain complexity. We provide advanced authentication solutions for governments, central banks and commercial companies, ensuring local economies grow, banknote security remains intact, and commercial products have robust market opportunities. Our partnership approach and proven sector expertise inspires proactive innovation, helping customers mitigate risks to promote revenue growth and gain competitive advantage.

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