

CUSTOMER SPOTLIGHT

Authentix helps the nation of Ghana combat fuel adulteration and recover lost revenue.



THE SITUATION

With a population of almost 28 million, Ghana is one of the fastest growing nations in Africa with moderate fuel taxes compared to its neighbors and limited fuel subsidies. The government of Ghana

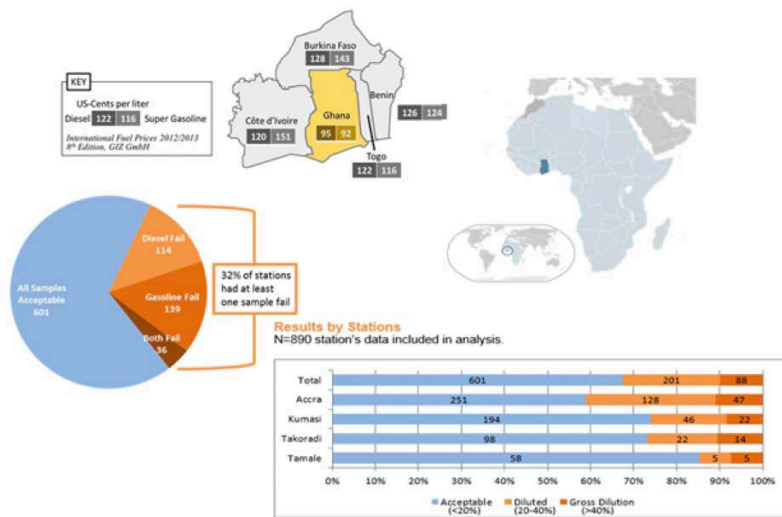
discovered that the adulteration of petroleum products offered for sale at retail outlets was degrading the quality of the available supply, while depriving the nation of significant tax revenue.



THE CHALLENGE

Baseline testing demonstrated that 32% of fuel stations had at least one tank showing dilution or adulteration and government officials estimated that the tax losses incurred from adulteration

was more than \$10M annually. Ghana was in urgent need of a solution to combat adulteration and recover fiscal tax revenue that was much needed for economic development.



RESULTS

- ✓ 78% reduction in adulteration of sampled products
- ✓ \$9M increase in annual excise tax collection
- ✓ 3.8 billion liters of fuel marked annually

Petrol ~USD 1.05/L compared to pre-mix at ~USD 0.27/L (July 2013)
Road diesel ~USD 1.05/L compared to marine diesel ~USD 0.87/L and kerosene at ~USD 0.50/L (July 2013)

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THE SOLUTION

Since 2013, Authentix has been providing the Ghana National Petroleum Authority (NPA) with a fuel integrity solution using quantitative and qualitative markers for adulteration and dilution field detection. This is supported with forensic markers deployed for laboratory confirmation.

The Authentix field analyzer detects dilution and adulteration of taxed road fuels at fuel stations while our laboratory analyzer provides quantitative, forensic results in a laboratory environment. These analyzers were placed in laboratories across ten regions of Ghana.

Authentix also provides support to Ghana including:

- Marking operations (marker storage & reconciliation, logistics, hand-marking trucks, warehouse management, etc.)
- Field testing/sampling implementation, training, auditing and maintenance
- Laboratory implementation and maintenance
- Program management and reporting



THE OUTCOME

With the adoption of the Authentix fuel integrity program, Ghana has seen a significant improvement in the quality of their fuel supply throughout the country.

- 78% reduction in adulteration of sampled products
- Annual increase of excise tax collection estimated to be nearly \$9M
- Improved environmental and public health benefits

The program, originally planned to mark two billion liters,

today marks over three billion liters of fuel with continued reduction in contraband and the preservation of authentic, marked fuel on the market.

This program has established an international reputation as a best-in-class fuel authentication program because of its continuous improvement over time, consistent increases in recovered volumes and taxes of excisable and subsidized fuels, and the reduction in the number of samples and retail outlets showing signs of dilution or adulteration.

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.