

E-fuel bus is a first in SA Thu, 14 Oct 2010 1:57

The first ethanol powered bus to be tried and tested in South Africa is the brainchild of MiX Telematics, which has stepped up to provide the correct technology to further reduce the carbon emissions of the bus.

MiX Telematics OEM key account manager John Anderson says the bus is part of a forward-thinking project because businesses are trying to reduce their environmental impact before it becomes mandatory to do so.

He says: "The use of ethanol has many benefits, the greatest of these being the reduction in carbon emissions. Ethanol is produced from sugar beet and the production of ethanol is creating job opportunities around the world. According to research done in South Africa for every bus that runs on ethanol fuel 2-3 jobs are created in rural areas where it is most needed.

"So not only will fewer carbon emissions enter the atmosphere but many unemployed South African may find themselves with a job. It makes sense to go this route. "

The bottom line

The thought that plagues most business owners is how this fuel adjustment will affect the bottom line. Anderson says while it works out to be slightly more expensive using ethanol than diesel, for example, the savings will come in the long run as businesses will pay less environmental tax.

As the need has arisen for transport companies to reduce their carbon emissions, MiX Telematics has been developing and implementing fleet management technology designed specifically for this purpose.

"Companies who adopt this technology are able to accurately measure and report on their carbon emissions. By reducing fuel consumption, carbon emissions are reduced and our technology can, without a doubt, make this a reality for companies such as Metrobus," he says.

MiX Telematics' FM Communicator unit, placed in the first ethanol-powered bus in South Africa, is used worldwide and can monitor fuel consumption to calculate CO² emissions in order to adhere to the strict standards set by the rest of the world.

"Our systems measures fuel consumption and CO² emissions and clearly indicates if the vehicle is over the limit," adds Anderson.

An eye on driver behaviour

Not only that, but the system also monitors driver behaviour, records drivers' hours, advises when maintenance is in order, can be used to assess and plan routes to ensure optimum fuel efficiencies and can advise bus owners on what busses are best for which routes ie a double decker, single or flexible dual carriage.

"Unlike other systems, our system links directly to the on board computer via the CANbus which allows us to monitor and report on all aspects of the vehicle. We also work closely with the fleet owners on training their drivers to ensure vehicles are used efficiently. It has been interesting to see just how this alone has impacted the fuel efficiency and in turn the carbon output of vehicles," says Anderson.

MiX Telematics was approached by its long-standing partner, Scania, earlier this year to get involved in the ethanol-powered bus trial.

Scania had been working closely with Metrobus to implement a reduction in carbon emissions and in order to attain the results required, contacted MiX Telematics. Since 2003 MiX Telematics has supplied web-based vehicle and fleet management solutions to Scania.

MiX Telematics has also performed an extensive amount of research and development with Scania, assisting Scania with contract management and allowing it to bill customers on a per-kilometer basis. The main concern for Scania in this ethanol-powered bus trial was to reduce fuel consumption and MiX Telematics provided the technology to make this a reality. The approach was to monitor and adjust driver behaviour and initiative effective routing in order to attain real fuel reductions.

MiX Telematics worked with Metrobus to fit the units and assess the expectations of the bus company. Metrobus was a willing participant in the trial and offered its assistance where necessary.

The results

During the period from mid September to date, MiX Telematics concluded the following results: The Ethanol bus consumed 80 litres per 100km and produced only 125g of CO² per km. An equivalent diesel bus will use about 48 litres of diesel per 100km but will produce approximately 1 285g of CO² per km

"The relationship between Scania, Silversands Ethanol and Metro is not only creating the first ethanol-powered bus project but the biofuels industry is seeing its first feasible project in the history of South Africa. With MiX Telematics monitoring the system, the successes of this project can be traced and analysed in ways not done before. This project, although starting with busses, has far reaching implications for the biofuels market in South Africa and Africa," says Anderson.