

Title: Biodiesel and Diesohol Urban Buses Program Smoke Emissions and Performance

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Summary:

Two alternative fuels were evaluated in the city of Curitiba under two separate experimental programs: In the first program, a mixture of 20% biodiesel (methyl soyate) in diesel (B20) was tested for three months in a fleet of 20 urban transit buses, while having a reference group of other 20 buses running on diesel. Within this period, smoke emissions, fuel consumption, and spent motor oil characteristics results for the B20 fuel powered test fleet were compared to those of the reference fleet running on diesel. In the second experiment, for seven months two Mercedes-Benz urban transit buses were run on a diesohol (11.2% alcohol/2.6% AEP102 additive / 86.2% diesel) blend, while alternating the fuel to diesel and diesohol in the first two months. Smoke emissions, fuel consumption, and spent motor oil were evaluated and compared.

The results of both programs showed a slightly higher fuel consumption and higher cost for fuels, while reverting in a clear environmental benefit due to important smoke emissions reduction. Emission reductions for biodiesel are comparable, and a cost/benefit analysis is presented for both fuels.

Market Segment: Transit

Accessibility: Public

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