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Results of Electric Vehicle Demonstration Program
Conclusions

It was observed that at constant speed driving within the range of 50 to 90 km/h, the EV's energy consumption varies from 0.28 to 0.42 kWh/km respectively. This means that the equivalent diesel fuel consumption of this large van (maximal allowed weight is 4.5 ton) ranges from 3 to 4.5 lit/100km, pointing out the high operational efficiency of the electric drive train.

The results of the urban driving experiments demonstrate the importance of the driving style in achieving minimal energy consumption and as a result – maximal vehicle range. A calm driving style without sharp accelerations and decelerations can save up to 50% energy when compared to an aggressive driving style.

The results of the dynamic performance test of the EV demonstrate that the dependency of the power density on the charging state of the Zinc-Air battery is relatively low.

The test program included 20 demonstration drives. The average range that was measured between battery recharges was approximately 300 km per drive. It is important to mention that most of the drives were urban ones therefore the energy consumption was high and the demonstration vehicle was equipped with a relatively out-of-date propulsion system that include transmission gear and a clutch which caused unnecessary energy losses.

References

3. Overview electric vehicle fleet tests in Europe. Research funded in part by the Commission of the European Communities, April 1999.