

TECHNICAL AND ECONOMICAL FEASIBILITY STUDY OF A SMALL HYBRID VEHICLE FOR URBAN TRANSPORTATION

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Abstract: A technical and economical study has been carried out by the authors in order to assess the feasibility of the hybridisation of a small vehicle for urban transportation. An existing commercial vehicle powered by a 4kW internal combustion engine has been taken as a reference. A possible layout of the new hybrid propulsion system has been studied. Weights and volume occupancy have been examined. Initial and operating costs have been estimated and compared with the present market costs of the original vehicle. Performance calculations allowed to evaluate the vehicle behaviour in a standard mission and management aspects have been discussed.

Keywords: Hybrid Electric Vehicles, Urban transportation.