

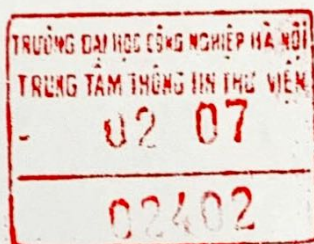
Second Edition



Electric Vehicle Technology *Explained*

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ELECTRIC VEHICLE TECHNOLOGY EXPLAINED



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Preface

Electric vehicle technology is now in its third century of development and is likely to advance rapidly in the coming years.

Electric trains are widely used and modern high-speed trains are competitive with air travel in terms of journey speed over shorter land routes. In energy terms they use less than 10% of the fuel per passenger kilometre than air transport.

Electric road vehicles have not achieved the commercial success that internal combustion engine vehicles have; however, battery technology has now developed to the point where electric vehicles are being commercially produced. Future battery developments are likely to accelerate the use of electric road vehicles in the next few years.

Small electric vehicles such as golf buggies and personnel carriers in airports have become well established. Electric bicycles are becoming increasingly popular and are considered one of the fastest ways to move about crowded cities.

Potential environmental benefits which can result from the use of electric vehicles are substantial when the vehicles use electricity that is generated from sources which use highly efficient modern generating stations or which use nuclear or sustainable energy. Environmental benefits include zero exhaust emissions in the vicinity of the vehicles, reduced dependence on fossil fuels and reduced overall carbon emissions.

This book explains both the technology of electric vehicles and how they affect the environment. The book is designed for engineers and scientists who require a thorough understanding of electric vehicle technology and its effects on the environment.

John Lowry