

Electricity in transport

Between 1832 and 1839 Robert Anderson from Scotland invented the first electric carriage. More successful electric road vehicles were devised¹ by both American Thomas Davenport and Scotsman Robert Davidson around 1842. The first urban light rail system was simply a small boxy² car pulled by horses over rails. The first system of this type began operating in New York City in 1832.

The first electric passenger train was presented by Werner von Siemens in Berlin in 1879. The train, consisting of the locomotive and three cars, reached a maximum speed of 13 km/h.

By the late 19th century, electric generator and motor technology had advanced, so that it was possible to use generators as a power source for tramcars. The first electric tramway in Britain, the Blackpool Tramway, was opened in 1885 along Blackpool Promenade.

The London underground system, which is the oldest in the world, began operating in 1863. In 1890 it became the first to operate electric trains. The new electric tram – or streetcar as it is called in American English – became the

main mode of transportation throughout the first half of the 20th century. In the 1920s, however, streetcars started to decline in the United States, due to the development of the combustion engine and Henry Ford's new mass production of petrol cars. Europe has maintained and expanded its streetcar systems. Today most trams use electrical power, usually fed by a pantograph.³

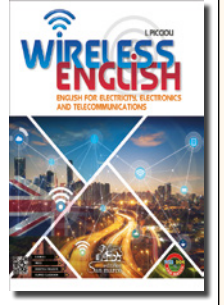
The oil crisis in the early 1970s saw manufacturers planning a new era for electric cars. Ford, General Motors and AMC all produced a number of concept cars⁴ and prototypes. Today there is a renewed interest both in trams and electric cars, as they do not pollute the environment and for this reason, they are considered 'clean' means of transport.

GLOSSARY

- 1 invented
- 2 resembling a box
- 3 device that collects electric current from overhead lines for electric trains or trams
- 4 cars made to show new styling or new technology; they are often displayed at motor shows to see customer reaction to new and radical designs



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ACTIVITIES

- 1** Answer the following questions.
- 1 Who invented the electric carriage?
 - 2 Where was the first urban light rail system used?
 - 3 When was the first electric passenger train presented?
 - 4 When did the London underground system start operating?
 - 5 Which means of transport was the most popular in the first half of the 20th century?
 - 6 When did streetcars start to decline in the USA? Why?
 - 7 What role does electricity play in transport today?

- 2** Scan the text and find the English equivalents of the following Italian words and expressions.
- 1 Carrozza
 - 2 Ferrovia leggera
 - 3 Metropolitana
 - 4 Motore a combustione
 - 5 Crisi petrolifera
 - 6 Ambiente
 - 7 Mezzi di trasporto
 - 8 Prototipi

- 3** Match the words to make correct collocations.
- | | |
|--------------|------------|
| 1 Road | A crisis |
| 2 Rail | B engine |
| 3 Passenger | C system |
| 4 Combustion | D cars |
| 5 Petrol | E trains |
| 6 Oil | F vehicles |

- 4** Fill in the table with the correct information.

Milestones in electric transport		
When	Who	What
1832 - 1839	Robert Anderson	Electric carriage

- 5** Read the short text about the Red Arrows. Then gather further information about these types of trains: which cities they connect, how much tickets cost, etc.

Red Arrows

Red Arrows are new, high speed trains that, with an average speed of 300 km/h, are capable of reaching Italian cities in a very short lapse of time. Among other services, they offer on board food services, wi-fi connection and business class seats.

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