

HISTORICAL NOTE**● Riding the Electric Rails**

For more than 100 years, the trolley, or streetcar, was a popular way to travel around a city. Then, beginning in the 1950s, most cities ripped up their trolley tracks to make way for automobiles. Today, trolleys are making a comeback around the world.

From Horse Power to Electric Power

In 1832, the first trolleys, called *horsecars*, were pulled by horses through the streets of New York. Soon horsecars were used in most large cities in the United States. However, using horses for power presented several problems. Among other things, the horses were slow and required special attention and constant care. So inventors began looking for other sources of power.

In 1888, Frank J. Sprague developed a way to operate trolleys with electrical energy. These electric trolleys ran on a metal track and were connected by a pole to an overhead power line. Electric charges flowed down the pole to motors in the trolley. A wheel at the top of the pole, called a *shoe*, rolled along the power line, allowing the trolley to move along its track without losing contact with its power source. The charges passed through the motor and then returned to a power generator by way of the metal track.

Taking It to the Streets

By World War I, more than 40,000 km of electric-trolley tracks were in use in the United States. The trolley's popularity helped shape American cities because businesses were built along the trolley lines. But competition from cars and buses grew over the next decade, and many trolley lines were abandoned.

By the 1980s, nearly all of the trolley lines had been shut down. But by then, people were looking for new ways to cut down on the pollution, noise, and traffic problems caused by automobiles and buses. Trolleys provided one possible solution. Because they run on electrical energy, they create little pollution, and because many people can ride on a single trolley, they cut down on traffic.

Today, a new form of trolley is being used in a number of major cities. These light-rail transit vehicles are quieter, faster, and more economical than the older trolleys. They usually run on rails alongside the road and contain new systems, such as automated brakes and speed controls.

Think About It!

Because trolleys operate on electrical energy, does this mean that they don't create any pollution? Explain your answer.