

# THE POWER OF PUBLIC TRANSPORTATION IN KNOXVILLE



Washington Avenue Streetcar



Streetcar Horse Fleet



Streetcar Mule Fleet

## 1876: HORSE POWER

Streetcar service began in 1876 by the Knoxville Street Railway Company (officially chartered December 12, 1875). They laid the first set of tracks along Gay Street between Main and Jackson Avenues and the streetcars were pulled by horses or mules. Mules were preferred because they handled Knoxville weather better (especially the summer heat). Drivers would have to transfer the animals from one end of the streetcar to the other at the end of each trip. Each car held 18 passengers and they were scheduled to run every 20 minutes.

A typical horse or mule would pull a streetcar for about a dozen miles a day, or roughly 4-5 hours daily, so companies needed 10 or more animals in the stable for each streetcar. The animals also had to be cared for and cleaned up after, which the streetcar companies were responsible for.

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## 1890: ELECTRIC POWER

In 1890, Knoxville's first electric streetcar was introduced by the Rapid Transit Company and traveled from Gay Street to Lake Ottosee (now Chilhowee Park). By 1892, four lines were electrified; McCalla Avenue, Burlington, Washington Avenue and Broadway. The 1920's saw the peak of electric streetcar popularity, and during that decade, there were 53 miles of track in Knoxville, an average of 150 vehicles, and most lines operated every 10-minutes.

August 1, 1947, electric street cars made their last run in Knoxville.

Electric street cars got their power from overhead wires installed over streets. The street cars were connected to those wires by a long pole attached to the roof called a trolley pole. Early electric street car companies had to generate their own power so they built powerhouses that used large steam engines to turn generators to produce the electricity needed. This is why street car companies often operated as electric utility companies as well.

Knoxville's first electric streetcar that ran from Gay Street to Lake Ottosee (now Chilhowee Park)



Left: Knoxville Railway & Light Company Power Station in 1908

Right: Workers lay streetcar tracks at the corner of Gay St & Main St



Electric streetcars make "The Last Run" in Knoxville on August 1, 1947

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Knoxville Power and Light Company's inaugural bus fleet, October 1929. Operators in this photo from left to right, Homer Inklebarger, Sam Davis, Jim Hux, A. Y. Roberts and W. A. Gann



Knoxville Transit Line buses took part of the procession to bid farewell to the electric streetcars in 1947



KAT's fully restored 1957 GMC TDH 4512 with diesel engine



Fare tokens

## 1929: MOTOR POWER

On October 1, 1929, following an extensive survey commissioned by the City of Knoxville on the feasibility of converting streetcars to buses, and years of negotiations to determine what company would provide the service, Knoxville Power and Light Company began motor bus service along Washington Pike, Beaumont, and Sevierville Pike (there would be a fourth route to West Lonsdale added within a few days after the needed street repairs were finished).

There were 5 gasoline powered motor buses in the original fleet, with a 6th added shortly after. The buses could transport 21 passengers inside and an additional two on the rear platform. They were painted orange with a wine-colored roof, and they were stored in car barns on Magnolia Avenue (where the current Operations and Maintenance Facility is located today).

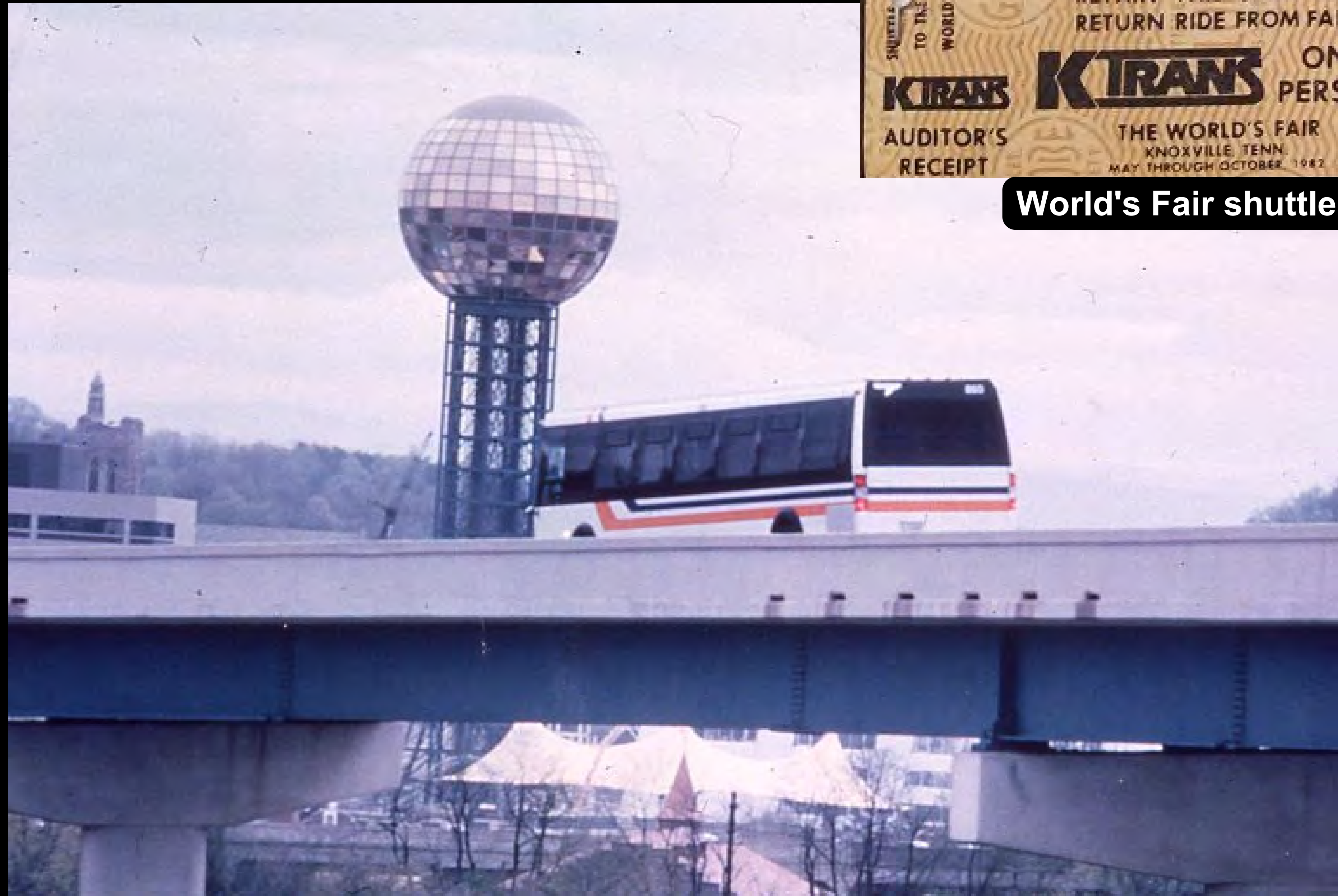
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K-Trans bus driving along the Western Avenue bridge with the World's Fair in the background



World's Fair shuttle bus ticket



Virgil Cox in his K-Trans uniform in 1982



## 1982: WORLD'S FAIR

The City of Knoxville bought the bus system in 1967 and by 1982 had renamed it K-Trans (we would not become KAT – Knoxville Area Transit, until 1995).

From May 1 – October 31, 1982, the World's Fair, officially called the Knoxville International Energy Exposition, brought over 11 million people to our city from around the world. To transport such a large amount of people, K-Trans purchased 40 brand new Grumman Flxible 870's and hired 73 new operators plus additional support staff and maintenance personnel. The buses were 40 feet long, used diesel fuel and averaged 4-6 miles per gallon. They could carry 38 passengers and were air-conditioned (the first air-conditioned buses were introduced into the fleet in 1972).

We are fortunate to still have several employees who started their careers with KAT during the World's Fair (or earlier). Thank you for your 40 plus years of service to the City of Knoxville!

Pictured from left to right: Jerry Jones, Virgil Cox, Mike McAmis, Katie Griffin and Jeff Cashion.  
(not pictured: Maxine Donaldson)



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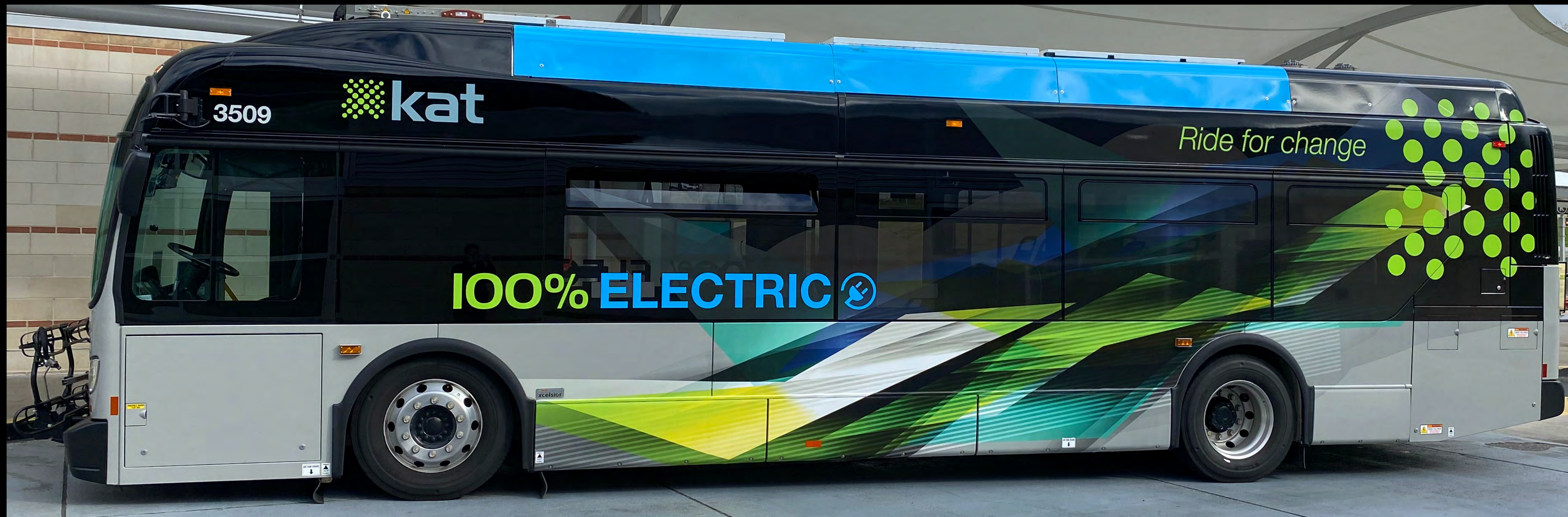
## 2003: CLEAN FUELS

KAT began our drive towards sustainability in 2003 with the purchase of propane-powered vehicles. These were replaced in 2009 by Gillig Low floor buses powered by clean diesel. We have 12 still in use and they average 3.9 miles per gallon. In 2014, we switched to the hybrid-electric Gillig Low Floor buses. We have 29 of them and they average 5.7 miles per gallon.

In October of 2021 we introduced the all-electric New Flyer buses to our fleet! They are 35 feet long, carry 29 passengers and have USB charging ports next to all the seats. We have 12 in operation and anticipate adding 6 more in the near future. They run on Lithium ion batteries that store up to 288 kw and in early tests have been averaging 1.85 kWh per mile. The buses have a regenerative braking system, meaning the battery recaptures some of its charge every time the brake is applied. They are charged by Heliox chargers, and the buses have charging ports in the front, rear and on the roof. We are still capturing data daily to evaluate overall performance and determine what factors affect battery life and power (i.e. weather, road grade, etc).

In 2010, the John J. Duncan, Jr. Knoxville Station became Knoxville's first LEED-certified\* government building. It has design features that take advantage of natural light, geothermal heating and cooling, a green roof and solar panels.

\*LEED (Leadership in Energy and Environmental Design) is the most widely used green building rating system in the world.



2021 New Flyer electric bus



Free trolley in downtown Knoxville



Heliox chargers for electric buses

