

Case Study

City of Wichita Transit Electrification



City of Wichita works with Evergy to introduce electric buses to transit fleet, saving money to reinvest in expanding service.

Overview

The City of Wichita's Transit Authority (WTA) saw an opportunity in fleet electrification to not only save money, but to improve their riders' safety and experience at the same time. The WTA was looking to replace their aging diesel vehicles with new electric buses. Given the scale of their operation, any reduction in costs would have a big impact on their ability to serve customers. By partnering with Evergy, the WTA was able to make this plan a reality. Improving their service while helping the environment in the process.

"All transit struggles for operational dollars. Whenever you can reduce your operational costs you can use that funding to provide better, more frequent service. That's why one of our goals with electrification is to reinvest those saving to improve our service."

Mike Tann

Director of Transportation, City of Wichita

Challenge

The WTA faces many of the same challenges as most transit authorities across the country. With rider fares not able to fully support the system, Wichita Transit is constantly looking for ways to reduce costs in order to maintain this vital service to the community. The WTA knew that electrifying their fleet could make a tremendous difference in improving their bottom line. But while there was much to be gained by going electric, they needed help to create a plan for funding the project, building the infrastructure needed, and integrating the new buses into their operations. The WTA turned to Evergy as a partner to help make this idea a reality.

Results

As of 2021, Wichita has already made significant progress in making the transition to electric:

- 11 electric buses have already been added to the fleet
- Each new bus is expected to save the city \$462,000 over its lifespan
- Secured a \$2 million federal grant to help fund the new buses

By the Numbers

Operation size:

2 million yearly trips across 17 bus lines

Electric buses added to fleet:

11 buses currently in operation

Future plans:

100% electric fleet by 2030

Electric bus specifications:

Proterra Catalyst E2 Prodrive
160+ miles of range, full charge in 3.2 hours
440 kWh total battery capacity
250kW permanent magnet drive motor

Complete Coach Works Zeps

50+ miles of range, full charge in 4 hours
311 kWh total battery capacity
130kW high torque electric motor



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Results (continued)

- Awarded \$14 million toward the future cost of a downtown park-and-ride facility
- Recently applied for 24 additional electric vehicles
- Have set a goal of reaching a 100% electric fleet (84 vehicles) by 2030

The WTA engaged Evergy from the very beginning to explore electrifying their fleet. Evergy worked with the WTA to evaluate business needs, understand and design the infrastructure needed to support electrification, and find ways to reduce the upfront costs involved in going electric. Evergy also worked with the WTA to evaluate how the addition of electric buses would change their energy usage and offered rate options to help the WTA maximize their savings.

The introduction of electric buses has not only helped the WTA financially, but has also been enthusiastically received by drivers and riders. The new buses offer a quieter, safer and smoother ride for everyone.

After seeing the advantages of an electric fleet firsthand, the WTA has increased their commitment to electrification with a bold plan to go 100% electric by 2030. This includes moving from 11 electric vehicles today to 84 projected electric vehicles in the future. The WTA continues to work with Evergy to expand their operational plan to achieve this ambitious and important goal.

GET STARTED SAVING

Join the WTA and other organizations saving money and energy by partnering with Evergy to make fleet electrification a reality. Our electric vehicle advisory team can help evaluate options to transition your fleet to electric. Together, we can help you understand electric charging costs and equipment, total cost of vehicle ownership, available incentives and ways to achieve your sustainability goals, reduce operating cost and boost your bottom line.

\$462,000

estimated savings per bus

Energy Support



Subject matter expertise consultation



Assistance in reducing upfront costs



Rate options support