



Photo by: Jessica Wang

# Electric School Bus Deployment at Cherokee Central Schools with the Cherokee Boys Club

*This profile reflects the electric school bus deployment experience and perspective of Cherokee Boys Club for Cherokee Central Schools in North Carolina.*

## Overview

Cherokee Central Schools was the first district in North Carolina to deploy an electric school bus (ESB) and is poised to be the first with a fully electric fleet powered by a solar microgrid. Under the leadership of Katie Tiger, Electric School Bus Project Manager, and Donnie Owle, Service Manager, Cherokee Boys Club has deployed a fleet of 15 first-generation Thomas Jouley C2 ESBs for Cherokee Central Schools. They anticipate receiving seven additional buses by the end of 2025, including five newer second-generation models. The district has found electric school buses to be the right option for their community for several reasons, including the short length of their routes, the unique partnership between Cherokee Central Schools and their bus contractor, Cherokee Boys Club, and the numerous health, environmental, and climate benefits associated with ESBs.

Contact	<b>Katie Tiger</b> , Electric School Bus Project Manager <b>Donnie Owle</b> , Service Manager
District Size	1,600 students, one district
Student Population Transported	1,200 students
Bus Fleet	26 buses (five are spares)

## Charging Infrastructure

To support their electric fleet, Cherokee Central School District has installed four chargers, including:

- One 60 kW Proterra dual-port DC fast charger
- One 120 kW Proterra quad-port DC fast charger
- Two Rhombus V2G dual-port DC fast sequential chargers
- Six 50kW Eaton dual-port DC fast chargers

Cherokee Boys Club Inc. owns chargers, buses, and charge management software. Duke Energy provides electric power to the fleet.

## Clean Energy Infrastructure

The School District has vehicle-to-grid (V2G) capability with two of its chargers and a 50kW solar canopy bus depot. In 2025, it expects to install a 400kW solar microgrid, which will power its electric school bus chargers.

## Funding Sources

The Cherokee Boys Club has received funding from a variety of sources, including the North Carolina Department of Environmental Quality - VW Settlement grant, EPA Diesel Emissions Reduction Act funding, Duke Energy, the EPA Clean School Bus Program, the Eastern Band of Cherokee Indians (EBCI), Cherokee Boys Club and the Cherokee Preservation Foundation.

## Motivation

Improving local air quality, enhancing environmental conditions, and adapting to a changing climate were key motivators for Cherokee Central School to pursue electric school buses. The district also sought to provide a healthier ride for the students who rely on school buses for daily transportation.

## Implementation Challenges

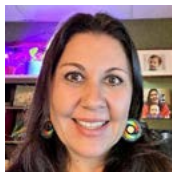
1. **Collaborating with the electric utility** was initially challenging. To improve communication and build trust, the district organized weekly project meetings and ultimately secured the utility's support.
2. **Reliability of charging infrastructure** is a problem that is actively being addressed.
3. **Bringing in this technology was a big change for the community**, so the district engaged residents throughout every step of the transition and incorporated their feedback into project plans. The local newspaper featured their outreach efforts.

## Community Benefits

1. **Decreased noise and air pollution**, resulting in a quieter and cleaner ride for students and better air quality in the surrounding community
2. **Increased climate resilience** for the EBCI community
3. **Cost savings**, particularly on fuel

---

*“ESBs and associated solar charging infrastructures are just the beginning of our plans to help create a climate-resilient future for our community. Cherokee people have stewarded these lands for thousands of years and adapted to changes in the climate and the environment. It is our responsibility as Indigenous people to care for this environment as our ancestors have done because if we don't, then what are we doing here?!”*



— Katie Tiger, Electric School Bus Project Manager, Cherokee Boys Club