



Smart Electric
Power Alliance

Case Study —

Partnering to Electrify Public Fleets

**A Case Study with Orlando Utilities Commission and
LYNX Public Transit**

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Case Study: Public Transit Partnering to Electrify Public Fleets

The Challenge	The Solution
Utilities face challenges establishing contact with fleets, learning about their needs, and developing programs that accommodate them. At the same time, fleets need help understanding the intricacies of transitioning to EVs.	Orlando Utilities Commission (OUC) and LYNX Public Transit Agency partnered on electrifying part of the LYNX public bus fleet.

Partnership Approach

Recognizing the need for partnerships as the United States shifts towards EVs, OUC partnered with the local transit agency, LYNX.

The initial partnership discussions aimed to understand each organization's operational dynamics and fleet electrification goals. Next, the partners formed a cooperative agreement outlining each party's roles and responsibilities. OUC would manage energy demands for the electrified LYNX fleet, while LYNX committed to providing real-time operational data to help OUC optimize its services.

Both organizations prioritized clear, frequent, and honest communication throughout the partnership. This open approach allowed for adjusting and adapting practices in response to new learnings and emerging insights. Their commitment to dynamic problem-solving and continuous improvement has been central to the successful operation and expansion of LYNX's electric bus fleet.

LYNX's Zero Emission Fleet Plan has summed up partnership activities to date:

"LYNX worked with the Orlando Utilities Commission to install a 1.2-megawatt electric charging station with eight (8) dispensers at the LYNX Operations Center in 2021. This station was purchased by and installed by the

Orlando Utilities Commission, with a station fee charged monthly for the period of the 12-year agreement. This station is able to recharge up to 16 Battery Electric Buses with depot-level overnight charging, fully servicing the existing zero-emission bus fleet. The current experience is a charging time of between three (3) to four (4) hours per bus though up to eight (8) buses can charge simultaneously.

An additional 1.4-megawatt electric charging station with 15 dispensers will also be installed at the LYNX Operations Center to support the FY 2022 Low or No Emission Grant Program and the Grants for Buses and Bus Facilities Competitive Program awarded buses. LYNX does not currently plan to install any further fixed-route bus charging stations due to space constraints and the lack of intent to specialize in fueling infrastructure. LYNX is currently exploring the installation of a Battery Electric Bus recharging station using the "gas station model" similar to the low-emission Compressed Natural Gas station. One station would be located at the LYNX Operations Center, one at the future Southern Operations Center, and consideration will be given to a similar arrangement at any future facilities. This model will provide the fuel as an operating cost without an investment in the fuel station itself."¹

1. Central Florida Regional Transportation Authority. (2021). Zero Emission Fleet Transition Plan

Utility Benefits	Customer Benefits
Gaining Real-World Knowledge: The partnership allowed OUC to gain hands-on insights into the operational needs of an electric fleet, including practical energy consumption metrics per mile, charging characteristics, and operational characteristics.	Customized Solutions: LYNX benefited from solutions tailored specifically to their power needs, improving the efficiency of their electric bus fleet operations.
Informing Broader Operations: The partnership experience gave OUC a real-world case study to present to other fleet operators, demonstrating feasible charging schedules and energy usage patterns.	Improved Communication: Regular dialogue and collaboration with OUC meant potential issues could be quickly identified and addressed, reducing downtime and maintaining reliable fleet operations.
Knowledge Sharing and Best Practices: The real-world insights gained from the operation of the LYNX fleet have become valuable learnings for OUC. The lessons learned in the field regarding charging patterns, energy demand, and fleet management have helped OUC refine its utility services and develop best practices, benefiting its wider customer base.	Increased Confidence in Electrification: The continuous support and expert advice from OUC mitigated LYNX's concerns about electrifying and charging requirements, allowing a smoother and more confident transition towards electric fleets. The practical insights gained through this collaboration have enabled LYNX to make more informed decisions about its electrification strategies.

Additional Benefits

- **Informing Program Design:** The insights and experiences from the OUC-LYNX partnership were used to design other programs offered by OUC to electric fleet operators.
- **Enhancing Customer Relationship:** The partnership improved OUC's relationship with fleet operators and charging providers, positioning OUC as a trusted and proactive partner in the region's ongoing electrification efforts.
- **Community Impact:** The visible success of the

partnership has broader community impacts. It contributes to the local public perception of EVs. Seeing local public transit agencies like LYNX adopting electric buses can influence community attitudes toward EVs, potentially accelerating EV adoption.



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