

City Council – Action Request Form

Date: August 12, 2025

To: Mayor, Mayor Pro Tempore, and Members of the City Council

From: Jeff Fansler, Director of Transportation
Kelly Garvin, Assistant Director of Transportation
Aaron King, Assistant City Manager

Council Action Requested:

Resolution Authorizing the Procurement of Gillig 29' Clean Diesel Buses for the Winston-Salem Transit Authority.

Strategic Focus Area: Quality Transportation

Strategic Objective: N/A

Strategic Plan Action Item: No

Key Work Item: No



Summary of Information:

The Winston-Salem Transit Authority (WSTA) currently operates a fleet of 45 hybrid-electric buses to provide fixed-route service across a network of 28 routes in Winston-Salem. According to the Federal Transit Administration (FTA), the useful life of these vehicles is defined as 12 years or 500,000 miles. Based on this standard, more than 50% of the fleet, 24 buses, have exceeded their useful life, resulting in increased maintenance needs and reduced reliability.

In 2024, the City was awarded funding through the FTA's Low and No Emission Vehicle Grant Program, which awarded funds for the procurement of five new diesel-electric buses. These vehicles are expected to be delivered by the end of 2026.

In addition to this grant, the City has secured \$7.6 million in funding through the Winston-Salem Area Transportation Planning Organization (WSATPO) Flexible Funding Program, with the required local match allocated in the City's capital plan. The Department of Transportation has been actively exploring strategies to maximize the impact of these funds and accelerate fleet replacement.

Committee Action:

Committee _____ **Action** _____

For _____ **Against** _____

Remarks: _____

Staff recommends utilizing available funding to purchase up to ten, 29-foot clean diesel buses to replace the aging fleet. The attached fleet summary indicates which ten buses would be subject to replacement. While this represents a temporary shift from the City's long-term sustainability goals, it is a necessary step given current operational demands and budget constraints for the following reasons:

Cost Efficiency:

The cost of procuring a single hybrid electric bus is estimated at \$1.2 million. Conversely, the Gillig 29-foot clean diesel bus, fitted for the technology utilized at WSTA, is estimated at \$700,000, essentially increasing buying power by 40%, if purchased. For comparison, the City of Winston-Salem could purchase up to six hybrid-electric buses, or ten clean-diesel buses with the current direct attributable funds allocated to the City of Winston-Salem by the WSATPO.

Delivery Timeline:

The delivery projection for hybrid-electric buses is estimated between 12 to 16 months from the issuance of the purchase order. Conversely, clean diesel buses have an estimated timeline of 6 to 12 months. While not significantly far apart, the reliability factor of the current fleet exacerbates the user experience while the fleet ages further.

Service Reliability:

WSTA's recent maintenance report highlights the following concerns related to the reliability of the fixed route buses:

- Through June of FY25, WSTA performed 452 road calls which resulted in a bus being temporarily out of service or replaced with a spare bus altogether. This is more than a 100% increase from FY24.
- Through June of FY25, the total road calls per 100,000 Miles have increased by 69.7% from FY24.

Environmental Considerations:

While clean diesel buses are not zero-emission, modern clean diesel technology offers substantial environmental improvements over previous generations such as:

- **50% reduction** in nitrogen oxide (NOx) emissions.
- **75% reduction** in particulate matter.
- **15% improvement** in fuel efficiency compared to diesel engines from a decade ago.

Fuel Efficiency and Cost Considerations:

New Gillig 29-foot clean diesel buses offer better fuel efficiency when compared to the hybrid-electric vehicles in our fleet today. Currently, WSTA buses average between 3.5 and 4 miles per gallon of diesel fuel. A new clean-diesel bus is expected to travel between 5 and 5.5 miles per gallon of diesel fuel, which offers about 30% - 35% better fuel efficiency over the current fleet.

Transparently, a new hybrid-electric bus would be expected to travel between 6 and 7 miles per gallon of diesel fuel which would offer approximately 45%-50% better fuel efficiency over the current fleet. However, the realization of fuel cost savings to cover the \$500,000 difference in initial purchase price would take well over 20 years based on our current service area and the average annual fuel cost per route.

This approach represents a balanced, data-driven response to immediate service needs, while allowing the City to remain committed to long-term sustainability goals as new funding and technologies become available. Demonstrating this commitment, WSDOT applied to the FY25 Low and No Emissions grant program with the intent to repeat our successful 2024 award from FTA. In the grant, staff demonstrated the City's intent to purchase five hybrid electric buses consistent once again with the City's clean initiatives.

Approval of this resolution would authorize a one-time procurement of up to ten Gillig 29' Clean-Diesel Buses with the sole focus of leveraging available funds to their fullest potential. The current fleet replacement schedule is far behind the replacement rate of four buses per year. Due to this, staff recommends an intentional effort to maximize buying power to make the system more reliable by purchasing ten clean diesel buses instead of six hybrid electric buses.